

# PLACENTIA AVENUE INDUSTRIAL NOISE IMPACT ANALYSIS

City of Perris  
April 24, 2024  
(Revised July 29, 2024)



Traffic Engineering • Transportation Planning • Parking • Noise & Vibration  
Air Quality • Global Climate Change • Health Risk Assessment

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April 24, 2024  
(Revised July 29, 2024)

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Project No. 19484

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## EXECUTIVE SUMMARY

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The project site is located on the northeast corner of Wilson Avenue and Placentia Avenue in the City of Perris, California. The project site is currently vacant. The project APNs are 300-170-003, 004, 005, 006, 010, 011, 012, 013, 014, 015, 016, and 017.

This noise impact analysis includes an analysis of potential noise and groundborne vibration impacts associated with two different alternative development scenarios for the 27.25-acre project site. Alternative 1 is proposed to construct a 578,265 square foot high-cube fulfillment center warehouse building with three access driveways on Wilson Avenue. The project north driveway and project south driveway will be truck only restricted to southbound left turns in and westbound right turns out only. The project central driveway will be a full access automobile only access. Alternative 2 proposes construction of a 462,300 square foot high-cube fulfillment center warehouse building with two driveways accessing Wilson Avenue and two driveways accessing Placentia Avenue. For the purposes of this analysis, one of the two alternatives is anticipated to be constructed and fully operational by the year 2026. Due to the greater square footage in size, impacts related to construction activities and any potential for project generated traffic to result in off-site noise impacts was only conducted for Alternative 1. Construction and off-site noise impacts related to Alternative 2 would be less. Because the analysis of project on-site generated operational noise involves more variables, including building, loading/unloading, and parking area locations, a detailed analysis of on-site operational noise was conducted for both alternatives.

Implementation of either alternative will require a Specific Plan Amendment to the Perris Valley Commerce Center Specific Plan for the proposed vacation of a paper street connecting Wilson Avenue to Murrieta Road and the vacation of a portion of Murrieta Road north of Placentia Avenue.

### **Existing Noise Environment**

Sensitive receptors that may be affected by project generated noise include the single-family residential land uses located approximately 50 feet to the south (across Placentia Avenue), 495 feet to the east/northeast (across drainage channel), 340 feet to the northwest (across Wilson Avenue), and 695 feet to the west (along Redlands Avenue) of the project site.

Measured short-term ambient noise levels in the project vicinity ranged between 60.6 and 71.1 dBA  $L_{eq}$  and long-term noise ambient noise levels ranged between 40.2 to 60.7 dBA  $L_{eq}$ . The dominant noise source in the project vicinity was vehicle traffic associated with Redlands Avenue, Placentia Avenue, Wilson Avenue, Rider Street, Evans Road and other surrounding roadways as well as overhead airplanes and noise associated with warehouses.

### **Project Construction Impacts - Onsite Equipment**

Project construction will not occur outside of the hours outlined in Section 7.34.060 of the City of Perris Municipal Code. Based on the modeled construction noise levels, construction noise levels are estimated to reach a maximum of 64.3 dBA at the nearest residential property line. Therefore, the project would not exceed City-established standards relating to construction noise. The project impact is less than significant; no mitigation is required.

Notwithstanding the above, best management practices (BMPs) are provided in the Project Description and should be added to project plans and in contract specifications to minimize construction noise emanating from the proposed project.

### **Project Construction Impacts – Offsite Vehicle Trips**

Project vehicle traffic generated during project construction would be anticipated to be nominal relative to existing roadway volumes and would not result in the doubling of traffic volume necessary to increase noise levels by 3 dBA. The project impact is less than significant; no mitigation is required.

### **Operational Noise Impacts – Onsite Sources**

#### *Alternative 1*

Based on the operational noise modeling conducted for Alternative 1, project operation is expected to range between 41 and 53 dBA CNEL at the nearby receivers and would not exceed the City's General Plan land use compatibility criteria of 60 dBA CNEL at residential land uses. The project impact is less than significant; no mitigation is required.

#### *Alternative 2*

Based on the operational noise modeling conducted for Alternative 2, project operation is expected to range between 41 and 49 dBA CNEL at the nearby receivers and would not exceed the City's General Plan land use compatibility criteria of 60 dBA CNEL at residential land uses. The project impact is less than significant; no mitigation is required.

### **Operational Noise Impacts – Offsite Vehicle Trips**

The addition of project trips is not expected to change noise levels more than the applicable threshold at any of the study roadway segments. The project impact is less than significant; no mitigation is required.

### **Groundborne Vibration Impacts**

Groundborne vibration generated by project construction would not exceed the levels necessary to cause architectural damage or severe annoyance to persons living or working in nearby buildings. The project impact is less than significant; no mitigation is required.

### **Air Traffic Impacts**

The project site is located within Compatibility Zone C1 (Primary Approach/Departure Zone) and is just outside of the 60 dBA CNEL noise contour of the March Air Reserve Base/Inland Port Airport. Industrial land uses, such as the project site, are allowed uses within Zone C1. Therefore, the project would not expose people residing or working in the project area to excessive noise levels associated with airports. The impact would be less than significant; no mitigation is required.

# 1. INTRODUCTION

---

This section describes the purpose of this study and introduces the proposed project.

## PURPOSE AND OBJECTIVES

The purpose of this report is to provide an assessment of the noise impacts resulting from development of the proposed project and to identify mitigation measures that may be necessary to reduce those impacts. The noise issues related to the proposed land use and development have been evaluated in light of applicable federal, state and local policies, including those of the City of Perris, in the context of the California Environmental Quality Act (CEQA).

Although this is a technical report, effort has been made to write the report clearly and concisely. A list of acronyms and glossary are provided in Appendix A and Appendix B of this report to assist the reader with technical terms related to noise and vibration analysis.

## PROJECT LOCATION

The project site is located on the northeast corner of Wilson Avenue and Placentia Avenue in the City of Perris, California. The project site is currently vacant. The project APNs are 300-170-003, 004, 005, 006, 010, 011, 012, 013, 014, 015, 016, and 017. A vicinity map showing the project location is provided on Figure 1.

## PROJECT DESCRIPTION

### Alternative 1

The 27.25-acre project site is proposed to include a 578,265 square foot high-cube fulfillment center warehouse building. The project site is proposed to provide three access driveways on Wilson Avenue. The project north driveway and project south driveway will be truck only restricted to southbound left turns in and westbound right turns out only. The project central driveway will be a full access automobile only access. For the purposes of this analysis, the proposed project is anticipated to be constructed and fully operational by year 2026. Figure 2 illustrates the project site plan for Alternative 1.

### Alternative 2

Alternative 2 proposes construction of a 462,300 square foot high-cube fulfillment center warehouse building with two driveways accessing Wilson Avenue and two driveways accessing Placentia Avenue. For the purposes of this analysis, one of the two alternatives is anticipated to be constructed and fully operational by the year 2026. Figure 3 illustrates the project site plan for Alternative 2.

Implementation of either alternative will require a Specific Plan Amendment to the Perris Valley Commerce Center Specific Plan for the proposed vacation of a paper street connecting Wilson Avenue to Murrieta Road and the vacation of a portion of Murrieta Road north of Placentia Avenue.

The following Best Management Practices (BMPs) should be provided on project plans and in contract specifications to minimize construction noise emanating from the proposed project, however, implementation is not required for compliance with applicable sections of the City of Perris Municipal Code:

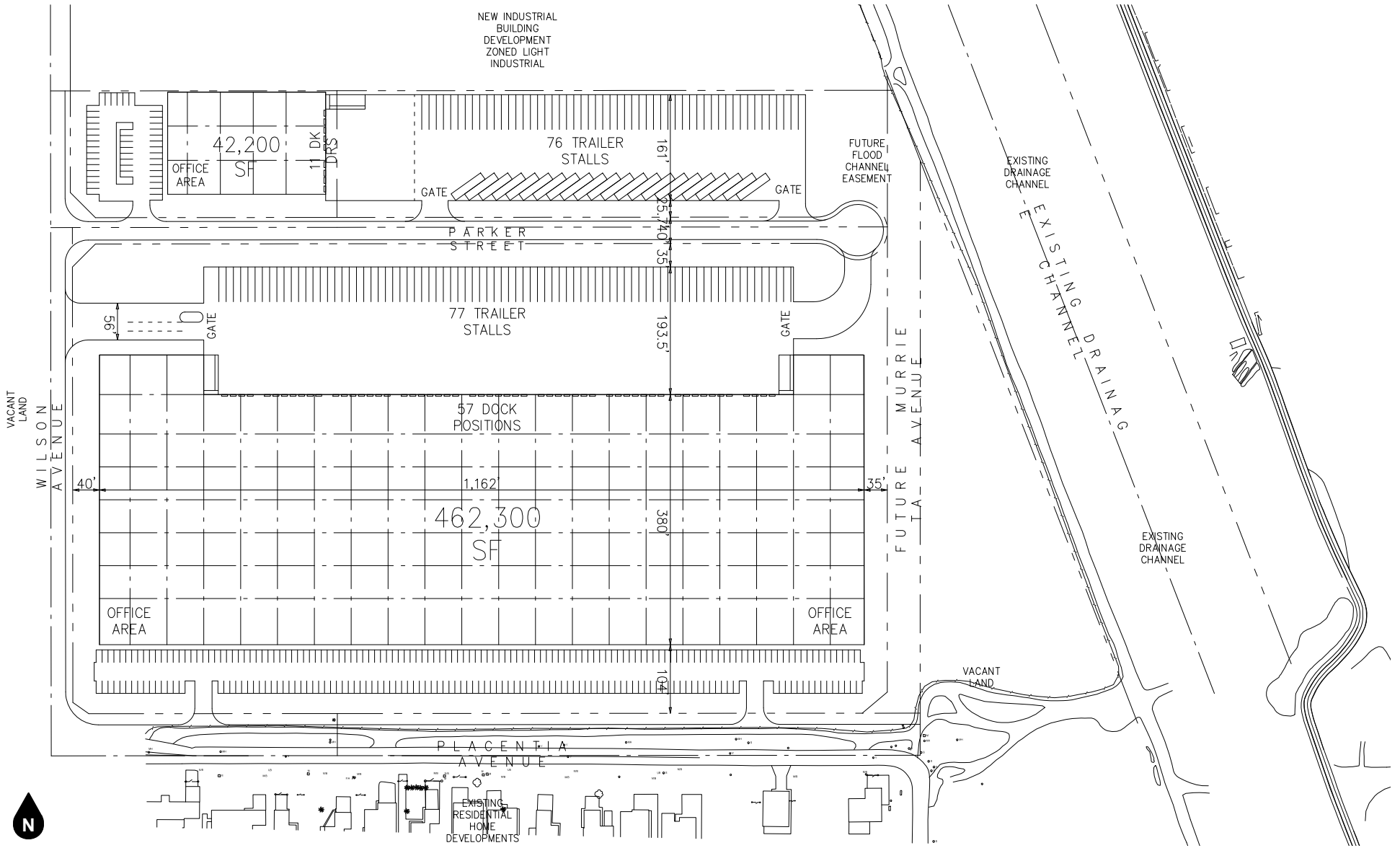
1. All equipment, whether fixed or mobile, will be equipped with properly operating and maintained mufflers, consistent with manufacturer standards.
2. All stationary construction equipment will be placed so that emitted noise is directed away from the noise sensitive receptors nearest the project site.
3. As applicable, all equipment shall be shut off and not left to idle when not in use.

4. To the degree possible, equipment staging will be located in areas that create the greatest distance between construction-related noise and vibration sources and existing sensitive receptors.
5. Jackhammers, pneumatic equipment, and all other portable stationary noise sources will be directed away and shielded from existing residences in the vicinity of the project site. Either one-inch plywood or sound blankets can be utilized for this purpose. They should reach up from the ground and block the line of sight between equipment and existing residences. The shielding should be without holes and cracks.
6. No amplified music and/or voice will be allowed on the project site.
7. Haul truck deliveries will not occur outside of the hours presented as exempt for construction per City of Perris Municipal Code Section 7.34.060.



**Figure 1**  
**Project Location Map**





**Figure 3**  
**Site Plan - Alternative 2**

## 2. NOISE AND VIBRATION FUNDAMENTALS

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This section provides an overview of key noise and vibration concepts.

### NOISE FUNDAMENTALS

Sound is a pressure wave created by a moving or vibrating source that travels through an elastic medium such as air. Noise is defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and in extreme circumstances, hearing impairment.

Commonly used noise terms are presented in Appendix B. The unit of measurement used to describe a noise level is the decibel (dB). The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, the “A-weighted” noise scale, which weights the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written dB(A) or dBA.

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features. Sound from point sources, such as air conditioning condensers, radiates uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD). Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

Decibels are measured on a logarithmic scale, which quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as a doubled traffic volume, would increase the noise levels by 3 dBA; halving of the energy would result in a 3 dBA decrease. Figure 4 shows the relationship of various noise levels to commonly experienced noise events.

Average noise levels over a period of minutes or hours are usually expressed as dBA  $L_{eq}$ , or the equivalent noise level for that period of time. For example,  $L_{eq(3-hr)}$  would represent a 3-hour average. When no period is specified, a one-hour average is assumed.

Noise standards for land use compatibility are stated in terms of the Community Noise Equivalent Level (CNEL) and the Day-Night Average Noise Level (DNL). CNEL is a 24-hour weighted average measure of community noise. CNEL is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours. DNL is a very similar 24-hour average measure that weights only the nighttime hours.

It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA; that a change of 5 dBA is readily perceptible, and that an increase (decrease) of 10 dBA sounds twice (half) as loud. This definition is recommended by the California Department of Transportation’s Technical Noise Supplement to the Traffic Noise Analysis Protocol (2013).

### VIBRATION FUNDAMENTALS

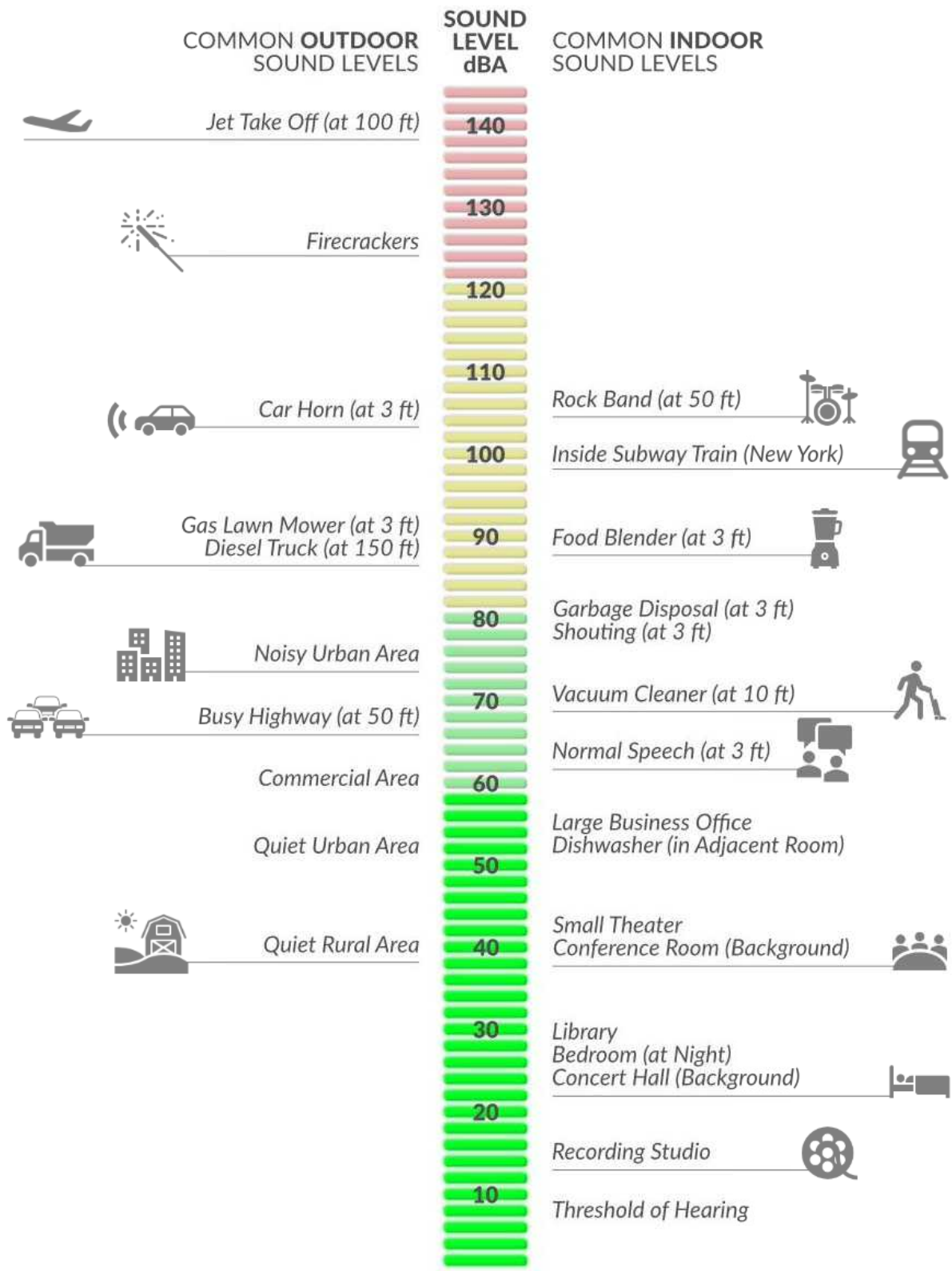
The way in which vibration is transmitted through the earth is called propagation. Propagation of earthborn vibrations is complicated and difficult to predict because of the endless variations in the soil through which waves travel. There are three main types of vibration propagation: surface, compression and shear waves.

Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. Compression waves, or P-waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. Shear waves, or S-waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or "side-to-side and perpendicular to the direction of propagation".

As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

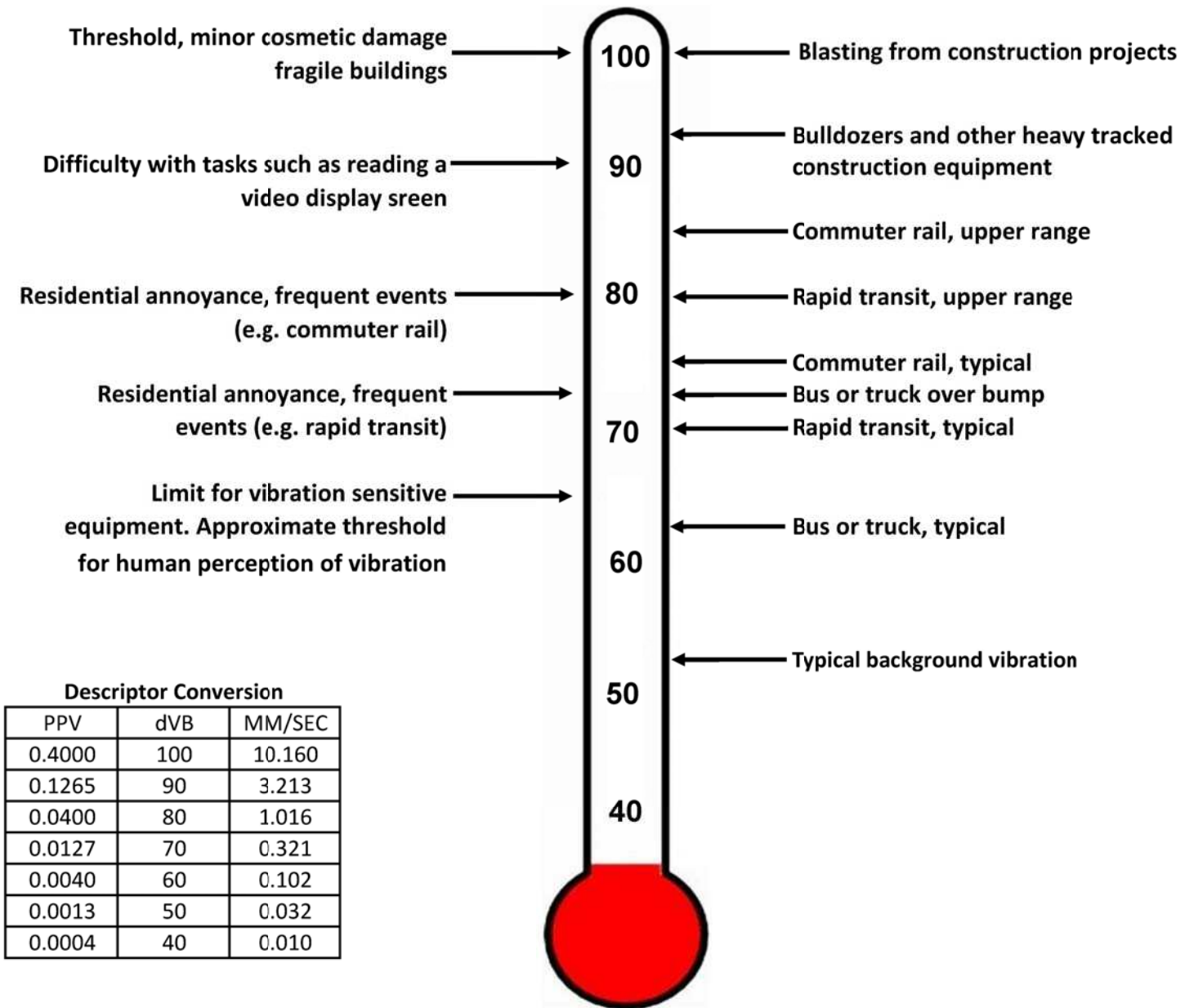
Vibration amplitudes are usually expressed as either peak particle velocity (PPV) or the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous peak of the vibration signal in inches per second. The RMS of a signal is the average of the squared amplitude of the signal in vibration decibels (VdB), ref one micro-inch per second. The Federal Railroad Administration uses the abbreviation "VdB" for vibration decibels to reduce the potential for confusion with sound decibel.

PPV is appropriate for evaluating the potential of building damage and VdB is commonly used to evaluate human response. Decibel notation acts to compress the range of numbers required in measuring vibration. Similar to the noise descriptors,  $L_{eq}$  and  $L_{max}$  can be used to describe the average vibration and the maximum vibration level observed during a single vibration measurement interval. Figure 5 illustrates common vibration sources and the human and structural responses to ground-borne vibration. As shown in the figure, the threshold of perception for human response is approximately 65 VdB; however, human response to vibration is not usually substantial unless the vibration exceeds 70 VdB. Vibration tolerance limits for sensitive instruments such as magnetic resonance imaging (MRI) or electron microscopes could be much lower than the human vibration perception threshold.



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Based on Policy & Guidance from Federal Aviation Administration

**Figure 4**  
**A-Weighted Comparative Sound Levels**



**Figure 5**  
**Typical Levels of Groundborne Vibration**

Source: FRA, 2012. Federal Railroad Administration High-Speed Ground Transportation Noise and Vibration Impact Assessment. Office of Railroad Policy Development, Washington, D.C. DOT/FRA/ORD-12/15. September.

### 3. EXISTING NOISE ENVIRONMENT

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This section describes the existing noise setting in the project vicinity.

#### EXISTING LAND USES AND SENSITIVE RECEPTORS

The project site is bordered by Wilson Avenue to the west, vacant land and industrial uses to the north, vacant land and a drainage channel to the east, and Placentia Avenue to the south of the project site.

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, single and multiple-family residential, including transient lodging, motels and hotel uses make up the majority of these areas.

Existing sensitive land uses that may be affected by project noise include single-family residential land uses located approximately 50 feet to the south (across Placentia Avenue), 495 feet to the east/northeast (across drainage channel), 340 feet to the northwest (across Wilson Avenue), and 695 feet to the west (along Redlands Avenue) of the project site.

#### AMBIENT NOISE MEASUREMENTS

An American National Standards Institute (ANSI Section S1.4 2014, Class 1) Larson Davis model LxT sound level meter was used to document existing ambient noise levels. In order to document existing ambient noise levels in the project area, five (5) 15-minute daytime noise measurements were taken between 1:36 PM and 4:23 PM on March 16, 2023. In addition, one (1) long-term 24-hour noise measurement were also taken from March 16, 2023 to March 17, 2023. Figure 6 shows the noise measurement locations. Field worksheets and noise measurement output data are provided in Appendix C.

As shown on Figure 6, existing ambient noise measurements were taken at the following locations:

- STNM1: Noise measurement represents the residential use located at 2865 Redlands Avenue, Perris. The noise measurement was taken just west of the residential use and east of Redlands Avenue.
- STNM2: Noise measurement represents the residential used located along Wilson Avenue just south of Placentia Avenue (2770 Wilson Avenue, Perris). The noise measurement was taken just east of the residential use and west of Wilson Avenue.
- STNM3: Noise measurement represents the residential used located along the southern side of Placentia Avenue (691 Placentia Avenue, Perris). The noise measurement was taken just north of the residential use and south of Placentia Avenue.
- STNM4: Noise measurement represents the residential used located east of the project site along Clapper Street (2980 Clapper Street, Perris). The noise measurement was taken just west of the residential uses near an adjacent bike trail.
- STNM5: Noise measurement represents the commercial and industrial uses located to the north of the project site along Wilson Avenue (3060 Wilson Avenue, Perris). The noise measurement was taken just west of Wilson Avenue near the commercial and industrial uses.
- LTNM1: Noise measurement represents the project site. The noise measurement was taken within the northwestern corner of the project site.

Table 1 provides a summary of the short-term ambient noise data. Table 2 provides hourly interval ambient noise data from the long-term noise measurements. Measured short-term ambient noise levels ranged between 60.6 and 71.1 dBA  $L_{eq}$ . Long-term hourly noise measurement ambient noise levels ranged from 40.2 to 60.7 dBA  $L_{eq}$ . The dominant noise source in the project vicinity was vehicle traffic associated with Redlands Avenue, Placentia Avenue, Wilson Avenue, Rider Street, Evans Road and other surrounding roadways as well as overhead airplanes and noise associated with warehouses.

**Table 1**  
**Short-Term Noise Measurement Summary (dBA)**

Daytime Measurements <sup>1,2</sup>								
Site Location	Time Started	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)
STNM1	1:36 PM	71.1	84.2	39.2	78.7	76.2	72.4	65.8
STNM2	1:59 PM	61.7	79.3	40.0	70.4	65.9	60.7	54.0
STNM3	2:30 PM	65.4	83.7	37.2	75.3	70.9	61.7	49.9
STNM4	3:29 PM	60.8	84.4	36.9	68.2	58.2	47.3	42.5
STNM5	4:08 PM	60.6	74.6	38.3	69.5	66.4	60.1	50.9

Notes:

- (1) See Figure 5 for noise measurement locations. Each noise measurement was performed over a 15-minute duration.
- (2) Noise measurements were performed on March 16, 2023.

**Table 2**  
**Long-Term Noise Measurement Summary (LTNM1) (dBA)**

24-Hour Ambient Noise <sup>1,2</sup>								
Hourly Measurements	Time Started	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)
Overall Summary	6:00 PM	51.2	85.0	30.9	57.7	48.4	44.5	41.1
1	6:00 PM	54.5	81.6	35.2	60.3	54.1	46.9	43.3
2	7:00 PM	48.4	68.5	40.1	55.0	51.4	47.9	46.0
3	8:00 PM	48.5	65.9	42.1	55.6	49.6	47.2	45.8
4	9:00 PM	45.1	61.6	40.1	48.8	46.9	45.5	44.6
5	10:00 PM	45.5	57.6	35.7	50.2	48.5	46.2	44.5
6	11:00 PM	41.5	56.4	33.6	46.6	44.8	42.4	40.0
7	12:00 AM	45.2	72.1	35.5	47.3	44.6	43.1	41.1
8	1:00 AM	40.2	59.9	34.0	45.0	42.7	40.8	38.3
9	2:00 AM	40.4	60.5	33.9	46.9	43.4	40.4	38.4
10	3:00 AM	41.4	58.5	33.8	46.6	43.8	42.2	40.1
11	4:00 AM	44.7	57.0	39.6	48.2	46.6	45.2	44.2
12	5:00 AM	41.8	62.0	34.3	47.3	44.2	41.6	40.0
13	6:00 AM	42.1	64.6	30.9	49.7	44.2	40.3	37.5
14	7:00 AM	60.7	78.1	32.5	71.6	64.9	56.1	45.5
15	8:00 AM	54.8	82.6	34.1	65.0	57.4	44.6	40.9
16	9:00 AM	49.9	69.2	34.5	61.2	53.9	45.3	41.0
17	10:00 AM	44.7	63.4	34.1	53.7	45.1	41.5	39.3
18	11:00 AM	40.9	55.3	33.3	49.2	44.8	40.0	37.4
19	12:00 PM	51.5	76.1	32.0	57.8	48.5	41.6	37.2
20	1:00 PM	42.5	58.0	32.4	50.5	46.6	42.0	39.1
21	2:00 PM	58.0	85.0	32.4	59.6	49.1	42.8	39.7
22	3:00 PM	42.9	66.5	31.8	51.2	46.0	41.8	38.7
23	4:00 PM	46.6	67.9	34.1	54.8	47.9	43.7	41.4
24	5:00 PM	43.9	60.6	33.6	53.4	47.1	41.8	39.3
CNEL	53.3							

Notes:

- (1) See Figure 5 for noise measurement locations. Noise measurement was performed over a 24-hour duration.
- (2) Noise measurement performed from March 16, 2023 to March 17, 2023.



**Legend**  
 ⊕ Noise Measurement Location  
 NM 1  
 ST NM Short-Term Noise Measurement  
 LT NM Long-Term Noise Measurement

**Figure 6**  
**Noise Measurement Location Map**

## 4. REGULATORY SETTING

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This section documents the regulatory framework and applicable noise standards.

### FEDERAL REGULATION

#### **Federal Noise Control Act of 1972**

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, EPA's Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In response, the EPA published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Levels of Environmental Noise). The Levels of Environmental Noise recommended that the Ldn should not exceed 55 dBA outdoors or 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas.

In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated Federal agencies, allowing more individualized control for specific issues by designated Federal, State, and local government agencies.

### STATE REGULATIONS

#### **State of California General Plan Guidelines 2017**

Though not adopted by law, the State of California General Plan Guidelines 2017, published by the California Governor's Office of Planning and Research (OPR) (OPR Guidelines), provides guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify the suitability of various types of construction relative to a range of outdoor noise levels and provide each local community some flexibility in setting local noise standards that allow for the variability in community preferences. Findings presented in the Levels of Environmental Noise Document (EPA 1974) influenced the recommendations of the OPR Guidelines, most importantly in the choice of noise exposure metrics (i.e., Ldn or CNEL) and in the upper limits for the normally acceptable outdoor exposure of noise-sensitive uses.

The OPR Guidelines include a Noise and Land Use Compatibility Matrix which identifies acceptable and unacceptable community noise exposure limits for various land use categories. Where the "normally acceptable" range is used, it is defined as the highest noise level that should be considered for the construction of the buildings which do not incorporate any special acoustical treatment or noise mitigation. The "conditionally acceptable" or "normally unacceptable" ranges include conditions calling for detailed acoustical study prior to the construction or operation of the proposed project.

#### **Department of Transportation**

The California Department of Transportation (Caltrans) has developed several publications on groundborne vibration. The *Transportation and Construction Vibration Guidance Manual* (Caltrans, 2020) provides informational content that supplements previous publications with improved knowledge and information relating to groundborne transportation- and construction-induced vibrations. Although the *Transportation and Construction Vibration Guidance Manual* is not an official policy, standard, specification, or regulation, it serves as a useful guide for evaluating vibration impacts.

Table 3 and Table 4 show the guideline criteria for potential damage and annoyance resulting from groundborne vibration. As shown in Table 3, these guidelines recommend that the threshold at which there is a risk of architectural damage is a peak particle velocity (PPV) of 0.25 inches/second (in/sec) for historic buildings, PPV of 0.3 in/sec at older residential structures, and a PPV of 0.5 in/sec at new residential structures and modern commercial/industrial buildings. Table 4 shows that a PPV of 0.4 in/sec is the threshold at which groundborne vibration becomes severe in regard to annoyance (Caltrans, 2020).

## LOCAL REGULATIONS

### **City of Perris General Plan**

The City of Perris has adopted their own version of the State Land Use Compatibility Guidelines for land use planning and to assess potential transportation noise impacts to proposed land uses (see Table 5).

The City of Perris General Plan Noise Element also includes the following goals, policies, and implementation measures in regard to noise which apply to the proposed project.

**Goal-1: Land Use Siting:** *Future land uses compatible with projected noise environments.*

**Policy I.A:** *The State of California Noise/Land Use Compatibility Criteria shall be used in determining land use compatibility for new development.*

#### *Implementation Measures*

I.A.1 *All new development proposals will be evaluated with respect to the State Noise/Land Use Compatibility Criteria. Placement of noise sensitive uses will be discouraged within any area exposed to exterior noise levels that fall into the “Normally Unacceptable” range and prohibited within areas exposed to “Clearly Unacceptable” noise ranges.*

**Goal-V: Stationary Source Noise:** *Future non-residential land uses compatible with noise sensitive land uses.*

**Policy V.A:** *New large scale commercial or industrial facilities located within 160 feet of sensitive land uses shall mitigate noise impacts to attain an acceptable level as required by the State of California Noise/Land Use Compatibility Criteria.*

#### *Implementation Measures*

V.A.1 *An acoustical impact analysis shall be prepared for new industrial and large-scale commercial facilities to be constructed within 160 feet of the property line of any existing noise sensitive land use. This analysis shall document the nature of the commercial or industrial facility as well as all interior or exterior facility operations that would generate exterior noise. The analysis shall document the placement of any existing or proposed noise-sensitive land uses situated within the 160-foot distance. The analysis shall determine the potential noise levels that could be received at these sensitive land uses and specify specific measures to be employed by the large scale commercial or industrial facility to ensure that these levels do not exceed 60 dBA CNEL at the property line of the adjoining sensitive land use. No development permits or approval of land use applications shall be issued until the acoustic analysis is received and approved by the City of Perris Staff.*

### **City of Perris Municipal Code**

Chapter 7.34 of the City’s Municipal Code establishes base ambient noise levels and establishes maximum noise level limits for stationary noise sources.

### **7.34.050 General Prohibition**

- (a) It unlawful for any person to willfully make, cause or suffer, or permit to be made or caused, any loud excessive or offensive noises or sounds which unreasonably disturb the peace and quiet of any residential neighborhood or which are physically annoying to persons of ordinary sensitivity or which are so harsh, prolonged or unnatural or unusual in their use, time or place as to occasion physical discomfort to the inhabitants of the city, or any section thereof. The standards for dBA noise level in section 7.34.040 shall apply to this section. To the extent that the noise created causes the noise level at the property line to exceed the ambient noise level by more than 1.0 decibels, it shall be presumed that the noise being created also is in violation of this section.
- (b) The characteristics and conditions which should be considered in determining whether a violation of the provisions of this section exists should include, but not be limited to, the following:
- (1) The level of the noise;
  - (2) Whether the nature of the noise is usual or unusual;
  - (3) Whether the origin of the noise is natural or unnatural;
  - (4) The level of the ambient noise;
  - (5) The proximity of the noise to sleeping facilities;
  - (6) The nature and zoning of the area from which the noise emanates and the area where it is received;
  - (7) The time of day or night the noise occurs;
  - (8) The duration of the noise; and
  - (9) Whether the noise is recurrent, intermittent, or constant.

### **7.34.060 Hours of Construction**

It is unlawful for any person between the hours of 7:00 PM of any day and 7:00 AM of the following day, or on a legal holiday, with the exception of Columbus Day and Washington's birthday, or on Sundays to erect, construct, demolish, excavate, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise. Construction activity shall not exceed 80 dBA  $L_{max}$  in residential zones in the City of Perris.

### **7.34.070 Refuse vehicles and parking lot sweepers**

No person shall operate or permit to be operated a refuse compacting, processing or collection vehicle or parking lot sweeper between the hours of 7:00 PM to 7:00 AM in any residential area unless a permit has been applied for and granted by the city.

### **7.34.080 Disturbing, excessive, offensive noises; declaration of certain acts constituting.**

The following activities, among others, are declared to cause loud, disturbing, excessive or offensive noises in violation of this section and are unlawful, namely:

- (7) Leaf blowers
- a. The term "leaf blower" means any portable, hand-held or backpack, engine-powered device with a nozzle that creates a direct able airstream which is capable of and intended for moving leaves and light materials.
  - b. No person shall operate a leaf blower in any residential zoned area between the hours of 7:00 PM and 8:00 AM on weekdays and 5:00 PM and 9:00 AM on weekends or on legal holidays.
  - c. No person may operate any leaf blower at a sound level in excess of 80 decibels measured at a distance of 50 feet or greater from the point of noise origin.

Leaf blowers shall be equipped with functional mufflers and an approved sound limiting device required to ensure that the leaf blower is not capable of generating a sound level exceeding any limit prescribed in this section.

### **19.51.080 Noise**

Chapter 19.51 of the City's Municipal Code establishes noise levels and regulations for land uses within the March ARB/IP Airport Overlay Zone (MAOZ).

*Airport Related Noise. Noise compatibility standards are intended to prevent the establishment of noise-sensitive land uses in portions of the airport environ that are exposed to significant levels of aircraft noise. Where permitted within the Airport Overlay Zone (AOZ), the following noise-sensitive land uses shall comply with applicable noise exposure criteria:*

- 1) *All new residences, schools, libraries, museums, hotels and motels, hospitals and nursing homes, places of worship, and other noise-sensitive uses must have sound attenuation features incorporated into the structures sufficient to reduce interior noise levels from exterior aviation-related sources to no more than CNEL 40 dB. This requirement is intended to reduce the disruptiveness of loud individual aircraft noise events upon uses in this zone and represents a higher standard than the CNEL 45 dB standard set by state and local regulations and the Riverside County ALUC policy.*
- 2) *Office space must have sound attenuation features sufficient to reduce the exterior aviation-related noise level to no more than CNEL 45 dB. To ensure compliance with these criteria, an acoustical study shall be required to be completed for any development proposed to be situated where the aviation-related noise exposure is more than 20 dB above the interior standard (e.g., within the CNEL 60 dB contour where the interior standard is CNEL 40 dB).*
- 3) *Standard building construction is presumed to provide adequate sound attenuation where the difference between the exterior noise exposure and the interior standard is 20 dB or less.*

**Table 3**  
**Guideline Vibration Damage Potential Threshold Criteria**

Structure Condition	Maximum PPV (in/sec)	
	Transient Sources <sup>1</sup>	Continuous/Frequent Intermittent Sources <sup>1</sup>
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: California Department of Transportation. Transportation and Construction Vibration Guidance Manual, Chapter 7 Table 19, April 2020.

Notes:

(1) Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

**Table 4  
Guideline Vibration Annoyance Potential Criteria**

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4




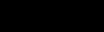
Source: California Department of Transportation. Transportation and Construction Vibration Guidance Manual, Chapter 7 Table 20, April 2020.

Notes:

(1) Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

**Table 5  
City of Perris Land Use Compatibility Guidelines for Noise**

Land Use Category	Community Noise Equivalent Level (CNEL)							
	55	60	65	70	75	80	85	
Residential: Low Density Single Family, Duplex, Mobile Homes	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Residential: Multi-Family	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Commercial: Hotels/Motels, Transient Lodging	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Schools, Libraries, Churches, Hospitals, Nursing Homes	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Auditoriums, Concert Halls, Amphitheatres, Meeting Halls	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Sports Arena, Outdoor Spectator Sports	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Playgrounds, Neighborhood Parks	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Office Buildings, Business Commercial and Professional, and Mixed-Use Developments	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable
Industrial, Manufacturing Utilities, Agriculture	Normally Acceptable	Normally Acceptable	Normally Acceptable	Normally Acceptable	Conditionally Acceptable	Clearly Unacceptable	Clearly Unacceptable	Clearly Unacceptable

-  Normally Acceptable: Specific land use is satisfactory, based up the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
  
-  Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
  
-  Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise reduction features included in the design.
  
-  Clearly Unacceptable: New construction or development should generally not be undertaken.

Notes:

Source: California Governor’s Office of Planning and Research, State of California General Plan Guidelines, Appendix C: Guidelines for the Preparation and Content of Noise Elements of the General Plan, February 1976 and City of Perris General Plan, 2005.

## 5. ANALYTICAL METHODOLOGY AND MODEL PARAMETERS

This section discusses the analysis methodologies used to assess noise impacts.

### CONSTRUCTION NOISE MODELING

Construction noise will vary depending on the construction process, type of equipment involved, location of the construction site with respect to sensitive receptors, the schedule proposed to carry out each task (e.g., hours and days of the week) and the duration of the construction work.

Construction noise associated with the proposed project was calculated at the sensitive receptor locations utilizing methodology presented in the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (2018) together with several key construction parameters, including: distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the project site. Distances to receptors were based on the acoustical center of the project site.

The equipment used to calculate the construction noise levels for each phase were based on the assumptions provided in the CalEEMod modeling in the Air Quality, Global Climate Change, HRA, and Energy Impact Analysis prepared for the proposed project (Ganddini Group, Inc., 2024). For analysis purposes, the distance measured from the project site to sensitive receptors was assumed to be the acoustical center of the project site to the property line of residential properties with existing residential buildings. Sound emission levels associated with typical construction equipment as well as typical usage factors are provided in Table 6. Construction noise worksheets are provided in Appendix D.

### STATIONARY SOURCE/OPERATIONAL NOISE MODELING

The SoundPLAN acoustical modeling software was utilized to model project operational stationary noise levels from the proposed project to adjacent sensitive uses (e.g., residences). SoundPLAN is capable of evaluating stationary noise sources (e.g., parking lots, drive-through menus, car wash equipment, vacuums, etc.). The SoundPLAN software utilizes algorithms (based on the inverse square law) to calculate noise level projections. The software allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations. In addition to the information provided below, noise modeling input and outputs assumptions are provided in Appendix E.

Operational noise levels were modeled utilizing representative sound levels in the SoundPLAN model. Modeled noise sources include a truck movement path, vehicle movement/parking lot noise, loading and unloading areas, and HVAC equipment. The CNEL as well as the expected maximum noise level associated with project operation was modeled utilizing representative sound levels in the SoundPLAN model. All noise sources were modeled to be in full operation.

### Parking Lot Noise

Parking lot noise was calculated using SoundPLAN methodology. Specifically, the traffic volume of the parking lot is entered with the number of moves per parking, the hour and the number of parking bays. The user defines whether the parking lots are for automobiles, motorcycles, or trucks, and the emission level of a parking lot is automatically adjusted accordingly. The values for the number of parking moves for each time slice is the number of parking moves per reference unit (most often per parking bay), averaged for the hour<sup>1</sup>.

SoundPLAN utilizes parking lot noise emission levels from the 6th revised edition of the parking lot study "Recommendations for the Calculation of Sound Emissions of Parking Areas, Motorcar Centers and Bus

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<sup>1</sup> SoundPLAN Essential 4.0 Manual. SoundPLAN International, LLC. May 2016.

Stations as well as of Multi-Story Car Parks and Underground Car Parks” published by the Bavarian Landesamt für Umwelt provides calculation methods to determine the emissions of parking lots.

The parking lot emission table documents the reference level (Lw, ref) from the parking lot study.

$$Lw, \text{ ref} = Lw0 + KPA + KI + KD + KStrO + 10 \log(B) \text{ [dB(A)]}$$

With the following parameters:

Lw0 = Basic sound power, sound power level of one motion / per hour on P+R areas = 63 dB(A)

KPA = Surcharge parking lot type

KI = Surcharge for impulse character

KD = Surcharge for the traffic passaging and searching for parking bays in the driving lanes  $2,5 * \lg(f * B - 9)$

f = Parking bays per unit of the reference value

B = Reference value

KStrO = Surcharge for the road surface

### **Truck Path**

An internal roadway was included in the model to represent peak hour truck traffic provided in the traffic study prepared for the project (Ganddini Group, April 2024).

### **Loading/Unloading**

The proposed loading area was modeled using a sound reference level for loading/unloading of pallet/ramp with a representative sound level of 70 dBA per square meter. It was assumed that loading/unloading activities would occur all of the time seven days a week 24-hours a day.

### **Mechanical Equipment (HVAC Units)**

A noise reference level of 67.7 dBA at 3 feet (sound power level of 78.7 dB) was utilized to represent rooftop 5 Ton Carrier HVAC units<sup>2</sup>. A rooftop HVAC plan is not available at the time of this analysis so the exact location and number of units per building were estimated. A total of 46 rooftop units were modeled on the proposed rooftops. The noise source height for each HVAC unit was assumed at 1 meter above the roof top.

### **MOBILE SOURCE NOISE MODELING**

Noise from vehicular traffic (Existing, Existing Plus Project, and Future) was modeled using a computer program that replicates the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Key model parameters and REMEL adjustments are presented below:

- Roadway classification (e.g., freeway, major arterial, arterial, secondary, collector, etc.),
- Roadway active width (distance between the center of the outer most travel lanes on each side of the roadway),
- Average Daily Traffic (ADT) Volumes, Travel Speeds, Percentages of automobiles, medium trucks and heavy trucks,
- Roadway grade and angle of view,

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<sup>2</sup> MD Acoustics, LLC Noise Measurement Data for RTU –Carrier 50TFQ0006 and car alarm.

- Site conditions (e.g., soft vs. hard), and
- Percentage of total ADT which flows each hour throughout a 24-hour period.

Traffic noise levels were calculated at the right-of-way based on distance from the centerline of the analyzed roadway. The modeling is theoretical and does not take into account any existing barriers, structures, and/or topographical features that may further reduce noise levels. Therefore, the modeled noise levels are shown for comparative purposes only to show the difference between with and without project conditions. Traffic noise calculation worksheets are included in Appendix F.

### **Existing and Existing Plus Project Traffic Noise Levels**

Project generated vehicle traffic is expected to utilize Wilson Avenue to access the project site. Existing average daily vehicle trips, project average daily vehicle trips, and project trip distribution were provided in the traffic study prepared for the project (Ganddini 2024). Per the traffic study, the project is anticipated to generate 1,047 new daily trips. Table 7 includes the modeled roadway segments as well as the average daily traffic volumes, posted speed limits, and vehicle mix utilized in this analysis.

### **GROUNDBORNE VIBRATION MODELING**

Groundborne vibration modeling was performed using vibration propagation equations and construction equipment source levels obtained from the FTA *Transit Noise and Vibration Impact Assessment Manual* (2018). Table 8 shows typical vibration levels associated with commonly used construction equipment based on data from the FTA.

There are several types of construction equipment that can cause vibration levels high enough to annoy persons in the vicinity and/or result in architectural or structural damage to nearby structures and improvements. For example, as shown in Table 8, a vibratory roller could generate up to 0.21 in/sec PPV at and operation of a large bulldozer could generate up to 0.089 PPV at a distance of 25 feet (two of the most vibratory pieces of construction equipment). Groundborne vibration at sensitive receptors associated with this equipment would drop off as the equipment moves away. For example, as the vibratory roller moves further than 100 feet from the sensitive receptors, the vibration associated with it would drop below 0.0026 in/sec PPV. It should be noted that these vibration levels are reference levels and may vary slightly depending upon soil type and specific usage of each piece of equipment. Groundborne vibration calculations are provided in Appendix G.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{\text{equipment}} = PPV_{\text{ref}} (25/D_{\text{rec}})^n$$

Where:  $PPV_{\text{ref}}$  = reference PPV at 25ft.

$D_{\text{rec}}$  = distance from equipment to receiver in ft.

$n$  = 1.5 (the value related to the attenuation rate through ground)

**Table 6 (1 of 2)**  
**CA/T Equipment Noise Emissions and Acoustical Usage Factor Database**

Equipment Description	Impact Device?	Acoustical Use Factor (%)	Spec. Lmax @ 50ft (dBA, slow)	Actual Measured Lmax @ 50ft (dBA, slow)	No. of Actual Data Samples (Count)
All Other Equipment > 5 HP	No	50	85	-N/A-	0
Auger Drill Rig	No	20	85	84	36
Backhoe	No	40	80	78	372
Bar Bender	No	20	80	-N/A-	0
Blasting	Yes	-N/A-	94	-N/A-	0
Boring Jack Power Unit	No	50	80	83	1
Chain Saw	No	20	85	84	46
Clam Shovel (dropping)	Yes	20	93	87	4
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	-N/A-	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Forklift <sup>2,3</sup>	No	50	n/a	61	n/a
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (<25KVA, VMS signs)	No	50	70	73	74
Gradall	No	40	85	83	70
Grader	No	40	85	-N/A-	0
Grapple (on backhoe)	No	40	85	87	1
Horizontal Boring Hydr. Jack	No	25	80	82	6
Hydra Break Ram	Yes	10	90	-N/A-	0
Impact Pile Driver	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact hammer (hoe ram)	Yes	20	90	90	212
Pavement Scarafier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	50	85	77	9
Paving Equipment	No	50	85	77	9
Pneumatic Tools	No	50	85	85	90

**Table 6 (2 of 2)**  
**CA/T Equipment Noise Emissions and Acoustical Usage Factor Database**

Equipment Description	Impact Device?	Acoustical Use Factor (%)	Spec. Lmax @ 50ft (dBA, slow)	Actual Measured Lmax @ 50ft (dBA, slow)	No. of Actual Data Samples (Count)
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Rivit Buster/chipping gun	Yes	20	85	79	19
Rock Drill	No	20	85	81	3
Roller	No	20	85	80	16
Sand Blasting (Single Nozzle)	No	20	85	96	9
Scraper	No	40	85	84	12
Shears (on backhoe)	No	40	85	96	5
Slurry Plant	No	100	78	78	1
Slurry Trenching Machine	No	50	82	80	75
Soil Mix Drill Rig	No	50	80	-N/A-	0
Tractor	No	40	84	-N/A-	0
Vacuum Excavator (Vac-truck)	No	40	85	85	149
Vacuum Street Sweeper	No	10	80	82	19
Ventilation Fan	No	100	85	79	13
Vibrating Hopper	No	50	85	87	1
Vibratory Concrete Mixer	No	20	80	80	1
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder/Torch	No	40	73	74	5

Notes:

- (1) Source: FHWA Roadway Construction Noise Model User's Guide January 2006.
- (2) Warehouse & Forklift Noise Exposure - NoiseTesting.info Carl Stautins, November 4, 2014  
<http://www.noisetesting.info/blog/carl-straatins/page-3/>
- (3) Data provided Leq as measured at the operator. Sound Level at 50 feet is calculated using Inverse Square Law.

**Table 7  
Project Average Daily Traffic Volumes and Roadway Parameters**

Roadway	Segment	Average Daily Traffic Volume <sup>1</sup>		Posted Travel Speeds (MPH)	Site Conditions
		Existing	Existing Plus Project		
Rider Street	West of Redlands Avenue	9,108	9,168	45	Soft
	East of Redlands Avenue	11,148	11,448	45	Soft
	West of Wilson Avenue	11,028	11,328	45	Soft
	East of Wilson Avenue	12,888	13,044	45	Soft
Placentia Avenue	West of Redlands Avenue	6,048	6,624	40	Soft
	Redlands Avenue to Wilson Avenue	4,008	4,740	25	Soft
Redlands Avenue	North of Rider Street	4,656	4,896	45	Soft
	South of Placentia Avenue	6,792	6,948	45	Soft
Wilson Avenue	South of Rider Street	2,316	2,772	35	Soft
	North of North Project Driveway	3,912	4,368	35	Soft
	North Project Driveway to Central Project Driveway	3,912	4,248	35	Soft
	Central Project Driveway to South Project Driveway	3,912	4,860	35	Soft
	South Project Driveway to Placentia Avenue	3,912	4,740	35	Soft
	South of Placentia Avenue	2,676	2,772	35	Soft

Vehicle Distribution (Light Mix) <sup>2</sup>			
Motor-Vehicle Type	(7 AM-7 PM)	(7 PM-10 PM)	(10 PM-7 AM)
Automobiles	75.56	13.96	10.49
Medium Trucks	48.91	2.17	48.91
Heavy Trucks	47.30	5.41	47.30

Vehicle Distribution (Heavy Mix) <sup>2</sup>			
Motor-Vehicle Type	Daytime % (7 AM-7 PM)	Evening % (7 PM-10 PM)	Night % (10 PM-7 AM)
Automobiles	75.54	14.02	10.43
Medium Trucks	48.00	2.00	50.00
Heavy Trucks	48.00	2.00	50.00

Notes:

- (1) Existing and project average daily traffic volumes and project vehicle mix obtained from the *Placentia Avenue Industrial Traffic Impact Analysis*, Ganddini Group Inc. (April 18, 2024).
- (2) Existing vehicle percentages are based on the Riverside County Industrial Hygiene Letter for Traffic Noise.

**Table 8  
Construction Equipment Vibration Source Levels**

Equipment		PPV at 25 ft, in/sec	Approximate Lv* at 25 ft
Pile Driver (impact)	upper range	1.518	112
	typical	0.644	104
Pile Driver (sonic)	upper range	0.734	105
	typical	0.170	93
clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Source: Federal Transit Administration: Transit Noise and Vibration Impact Assessment Manual, 2018.

\*RMS velocity in decibels, VdB re 1 micro-in/sec

## 6. NOISE AND VIBRATION IMPACTS

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This section analyzes the significance of project-related noise and groundborne vibration impacts relative to standards established by the City of Perris and other applicable agencies in the context of CEQA. Appendix G of the California Environmental Quality Act Guidelines (Title 14, Division 6, Chapter 3 of the California Code of Regulations) includes an environmental checklist that identifies issues upon which findings of significance should be made. The CEQA Environmental Checklist Appendix G, XIII. Noise, requires determination if the project would 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 area to excessive noise levels?*

### NOISE IMPACTS

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?*

### **Finding: Less Than Significant**

In relation to the Environmental Checklist noise issue “a”, applicable standards established by the City of Perris can be categorized into the following areas:

- Construction Noise
- Operational Noise

### **Project Construction**

#### **On-Site Equipment**

Construction noise is regulated within Section 7.34.060 of the City of Perris Municipal Code (see Regulatory Setting section of this report). Accordingly, the project would result in a significant impact if:

- Project construction occurs outside the hours of 7:00 AM and 7:00 PM Monday through Saturday or anytime on legal holidays, with the exception of Columbus Day and Washington's Birthday, and Sundays; or,
- Project construction noise exceeds 80 dBA  $L_{max}$  in residential zones within the City.

Project construction noise levels at nearby sensitive receptors were calculated using the FTA methodology. Construction noise modeling worksheets for each phase are provided in Appendix D. Anticipated noise levels during each construction phase are presented in Table 9.

Although not protected by City Ordinance criteria, the equivalent of the average noise level ( $L_{eq}$ ) associated with simultaneous operation of all equipment associated with each construction phase was modeled at properties that have existing residential uses, including those that are zoned for residential uses and those that are not zoned for residential uses (non-conforming residential land uses), within proximity of the project site. Because most all construction equipment is expected to move around the project site, combined noise levels were modeled from the center of the site, as is industry standard. Construction noise levels are expected to reach up to reach up to 67.7 dBA  $L_{eq}$  at the nearest residential property line to the south, 61.2 dBA  $L_{eq}$  at the nearest residential property line to the east/northeast, and 60.4 dBA  $L_{eq}$  at the nearest residential property line to the west of the project site (see Appendix D).

Project construction will not occur outside of the hours outlined in Section 7.34.060 of the City of Perris Municipal Code. Section 7.34.060 of the City's municipal code prohibits construction activity from exceeding 80 dBA  $L_{max}$  in residential zones within the City. Based on the modeled construction noise levels (see Table 9), construction noise levels are estimated to reach a maximum of 64.3 dBA at the nearest residential property lines. Therefore, the project would not exceed City-established standards relating to construction noise. The project impact is less than significant; no mitigation is required.

Notwithstanding the above, best management practices (BMPs) are provided in the Project Description and should be added to project plans and in contract specifications to minimize construction noise emanating from the proposed project.

### **Off-Site Vehicle Trips**

Construction truck trips would occur throughout the construction period. Given the project site's proximity to the 215 Freeway, it is anticipated that vendor and/or haul truck traffic would take the most direct route to the appropriate freeway ramps.

Placentia Avenue currently handles between approximately 4,008 and 6,048 average daily vehicle trips in the vicinity of the project site and Wilson Avenue handles between approximately 2,316 and 3,912 average daily vehicle trips.<sup>3</sup> According to the *Placentia Avenue Industrial Air Quality, Global Climate Change, HRA, and Energy Impact Analysis* (Ganddini Group, Inc., 2024), the greatest number of construction-related vehicle trips per day would be during building construction and paving at up to approximately 338 vehicle trips per day (243 worker trips and 94.8 vendor trips). Therefore, vehicle traffic generated during project construction is nominal relative to existing roadway volumes and would not result in the doubling of traffic volume necessary to increase noise levels by 3 dBA. The project impact is less than significant; no mitigation is required.

### **Project Operational Noise**

#### **Onsite Noise Sources**

Stationary noise source standards are established within the City of Perris General Plan Noise Element Implementation Measure V.A.1 and Section 9.02.050 of the City of Perris Municipal Code (see Regulatory Setting section of this report). Accordingly, the project would result in a significant impact if:

- Project operational noise exceeds the City-established noise standard of 60 dBA CNEL at the property line of adjoining sensitive land uses.

Noise levels at nearby sensitive receptors were determined based on the SoundPLAN acoustical model developed for the project. SoundPLAN modeling worksheets are provided in Appendix E. Project operational noise levels associated with Alternative 1 at the nearby receptors are shown on Figure 7 and Figure 8, conservatively assuming all on-site noise sources are operating simultaneously and operational noise levels

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<sup>3</sup> Existing average daily vehicle trips calculated from the PM intersection turning movement volumes provided in the Placentia Avenue Industrial Traffic Impact Analysis, Ganddini Group Inc. (April 18, 2024).

associated with Alternative 2 are shown on Figure 9 and Figure 10. Table 10 shows the modeled project operational noise levels relative to the City-established standards.

#### *Alternative 1*

As shown on Figure 7 and Figure 8 and in Table 10, operational noise associated with implementation of Alternative 1 would range between 41 and 53 dBA CNEL at the nearby receivers and would not exceed the City's General Plan land use compatibility criteria of 60 dBA CNEL at residential land uses. The project impact is less than significant; no mitigation is required.

#### *Alternative 2*

As shown on Figure 9 and Figure 10 and in Table 10, operational noise associated with implementation of Alternative 1 would range between 41 and 49 dBA CNEL at the nearby receivers and would not exceed the City's General Plan land use compatibility criteria of 60 dBA CNEL at residential land uses. The project impact is less than significant; no mitigation is required.

### **Offsite Operational Noise Sources**

California courts have rejected use of what is effectively a single “absolute noise level” threshold of significance (e.g., exceed 65 dBA CNEL) on the grounds that the use of such a threshold fails to consider the magnitude or severity of increases in noise levels attributable to the project in different environments (see *King and Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814). California courts have also upheld the use of “ambient plus increment” thresholds for assessing project noise impacts as consistent with CEQA, noting however, that the severity of existing noise levels should not be ignored by incorporating a smaller incremental threshold for areas where existing ambient noise levels were already high (see *Mission Bay Alliance v. Office of Community Investment and Infrastructure* (2016) 6 Cal.App.5th 160).

Pursuant to the Perris Valley Commerce Center Specific Plan (PVCCSP) environmental Impact Report (EIR), project roadway noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development.

When the resulting noise levels at noise-sensitive land uses (e.g., residential, etc.):

- are less than 60 dBA CNEL and the project creates a 5 dBA CNEL or greater project-related level increase; or,
- exceed 60 dBA CNEL and the project creates a 3 dBA CNEL or greater project-related noise level increase.

#### *Project Operational Mobile Source Noise*

Roadway noise levels were calculated at roadways included in the *Placentia Avenue Industrial Traffic Impact Analysis* (Ganddini Group, Inc., April 18, 2024) based on the FHWA Traffic Noise Prediction Model methodology. During operation, the proposed project is expected to generate approximately 1,047 average daily trips (non-PCE) with 85 trips during the AM peak-hour and 95 trips during the PM peak-hour. Roadway noise levels were calculated for the following scenarios:

- *Existing (without Project)*: This scenario refers to existing year traffic noise conditions.
- *Existing Plus Project*: This scenario refers to existing year plus project traffic noise conditions.

Table 11 shows the change in existing roadway noise levels with the addition of project-generated operational trips. FHWA Traffic Noise Prediction Model calculation worksheets are provided in Appendix F.

As shown in Table 11, modeled existing traffic noise levels range between 62-74 dBA CNEL and the modeled Existing Plus Project traffic noise levels range between 64-74 dBA CNEL at the right-of-way of each study roadway segment.

As shown in Table 11, the segments of Wilson Avenue from the Central Project Driveway to the South Project Driveway and Wilson Avenue from the South Project Driveway to Placentia Avenue have modeled noise levels exceeding 60 dBA CNEL with expected noise level increases of 3 dB or greater. However, there are no existing noise-sensitive uses located along Wilson Avenue from the Central Project Driveway to Placentia Avenue. In addition, the land adjacent to these roadway segments are designated as Light Industrial in the PVCCSP. All other modeled roadway segments would not exceed the lowest threshold of 3 dB.

Therefore, the addition of project trips is not expected to change noise levels in excess of the applicable threshold at any of the study roadway segments. The project impact is less than significant; no mitigation is required.

## GROUNDBORNE VIBRATION IMPACTS

*Would the project result in:*

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

### **Finding: Less Than Significant**

In relation to the Environmental Checklist noise issue “b”, the City of Perris has not established thresholds of significance concerning groundborne vibration. In the absence of City-established thresholds, groundborne vibration impacts are based on guidance from the *Transportation and Construction Vibration Guidance Manual* (California Department of Transportation, 2020) (see Regulatory Setting section). Accordingly, the project would result in a significant impact if:

- Groundborne vibration levels generated by the project have the potential to cause architectural damage at nearby buildings by exceeding the following PPV:
  - 0.08 in/sec at extremely fragile historic buildings, ruins, ancient monuments
  - 0.10 in/sec at fragile buildings
  - 0.25 in/sec at historic and some old buildings
  - 0.30 in/sec at older residential structures
  - 0.50 in/sec at new residential structures and modern industrial/commercial buildings.
- Groundborne vibration levels generated by the project have the potential to cause severe annoyance to people living or working in nearby buildings by exceeding a PPV of 0.4 in/sec.

Groundborne vibration modeling worksheets are provided in Appendix G.

Based on the groundborne vibration modeling, use of a vibratory roller is expected to generate a PPV of 0.033 in/sec and a bulldozer is expected to generate a PPV of 0.014 in/sec at the closest off-site building, a residential use located approximately 85 feet south of the project site. Other equipment anticipated to be used during project construction generate lower PPV. Therefore, groundborne vibration generated by project construction would not exceed the levels necessary to cause architectural damage or severe annoyance to persons living or working in nearby buildings. The project impact is less than significant; no mitigation is required.

The most substantial sources of groundborne vibration during post-construction project operations will include the movement of passenger vehicles and trucks on paved and generally smooth surfaces. Loaded trucks generally have a PPV of 0.076 at a distance of 25 feet (Caltrans 2020), which is a substantially lower PPV than that of a vibratory roller (0.210 in/sec PPV at 25 feet). Therefore, groundborne vibration levels generated by project operation would not exceed those modeled for project construction.

## AIR TRAFFIC IMPACTS

Would the project result in:

- 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 area to excessive noise levels?*

### **Finding: No Impact**

The closest airport to the project site is the March Air Reserve Base/Inland Port Airport, with airport runways located approximately 3.2 miles to the northwest of the project site. Per the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan (ALUCP) (2014), the project site is located within Compatibility Zone C1 (Primary Approach/Departure Zone). Exhibit N-3 of the Noise Element of the City's General Plan shows that the project site is located just outside of the airport's 60 dBA CNEL noise contour. In addition, Figure 4-2 of the more recent Final Air Installations Compatible Use Zones Study for March Air Reserve Base (Air Force Reserve Command) (AICUZ 2018) shows that the project site is located outside of the airport's 60 dBA CNEL noise contour. The 2018 AICUZ noise contour map is provided on Figure 11Figure 11.

Per the 2018 AICUZ the Air Force provides planning contours—noise contours based on reasonable projections of future missions and operations. AICUZ studies using planning contours provide a description of the long-term (5-10 year) aircraft noise environment for projected aircraft operations that is more consistent with the planning horizon used by State, tribal, regional and local planning bodies.”

The proposed project is a 513,776 square foot industrial warehouse building. Neither the City of Perris Municipal Code nor the March Air Reserve Base Inland Port ALCUP establish airport noise criteria for industrial or warehouse land uses. Furthermore, as shown in Table MA-2, Basic Compatibility Criteria, of the March Air Reserve Base Inland Port ALCUP, industrial land uses are considered allowed uses within Zone C1.

The total square footage proposed by the project includes approximately 10,000 square feet of associated office use. Section 19.51.080 of the City's Municipal Code includes a requirement of 45 dBA CNEL for office space. Section 19.51.080 of the City's Code further states that standard building construction is presumed to provide adequate sound attenuation where the difference between the exterior noise exposure and the interior noise standard is 20 dB or less. Per the Final AICUZ (2018), the project site is located outside of the airport's 60 dBA CNEL noise contour. Therefore, with standard building construction, the associated office use would not be anticipated to have airport related noise levels exceeding 45 dBA CNEL.

The project would not expose people residing or working in the project area to excessive noise levels associated with airports. This impact would be less than significant. No mitigation is required.

**Table 9  
Construction Noise Levels (dBA L<sub>max</sub>)**

Phase	Receptor Location	Closest Measured Ambient Noise Location <sup>2</sup>	Existing Measured Noise Levels (dBA, L <sub>max</sub> <sup>1</sup> )	Construction Noise Levels (dBA L <sub>max</sub> )	Exceeds Daytime 80 dBA L <sub>max</sub> Standard (Y/N)
Grading	Residential to the South (691 Placentia Ave)	STNM3	83.7	64.3	No
	Residential to the East/Northeast (2988 Clapper St)	STNM4	84.4	57.8	No
	Residential to the West (2865 Redlands Ave)	STNM1	84.2	56.6	No
Building Construction	Residential to the South (691 Placentia Ave)	STNM3	83.7	63.3	No
	Residential to the East/Northeast (2988 Clapper St)	STNM4	84.4	56.8	No
	Residential to the West (2865 Redlands Ave)	STNM1	84.2	55.6	No
Paving	Residential to the South (691 Placentia Ave)	STNM3	83.7	59.3	No
	Residential to the East/Northeast (2988 Clapper St)	STNM4	84.4	52.8	No
	Residential to the West (2865 Redlands Ave)	STNM1	84.2	51.6	No
Architectural Coating	Residential to the South (691 Placentia Ave)	STNM3	83.7	57.3	No
	Residential to the East/Northeast (2988 Clapper St)	STNM4	84.4	50.8	No
	Residential to the West (2865 Redlands Ave)	STNM1	84.2	49.6	No

Notes:

- (1) Construction noise worksheets are provided in Appendix D.
- (2) Nearest noise measurement as shown in Figure 5 and Table 1.

**Table 10**  
**Project Operational Noise Levels (dBA, CNEL)**

Receptor Location <sup>1</sup>	Existing Measured Noise Levels (dBA, CNEL) <sup>2</sup>	Alternative 1		Alternative 2	
		Operational Noise Levels (dBA CNEL)	Exceeds 60 DBA CNEL Standard (Y/N)	Operational Noise Levels (dBA CNEL)	Exceeds 60 DBA CNEL Standard (Y/N)
1. Single Family Residential land use.	53.3	41	No	43	No
2. Single Family Residential land use.	53.3	52	No	41	No
3. Single Family Residential land use.	53.3	50	No	46	No
4. Single Family Residential land use.	53.3	51	No	49	No
5. Commercial land use.	53.3	53	No	47	No

Notes:

(1) See Receptor Locations on Figure 5.

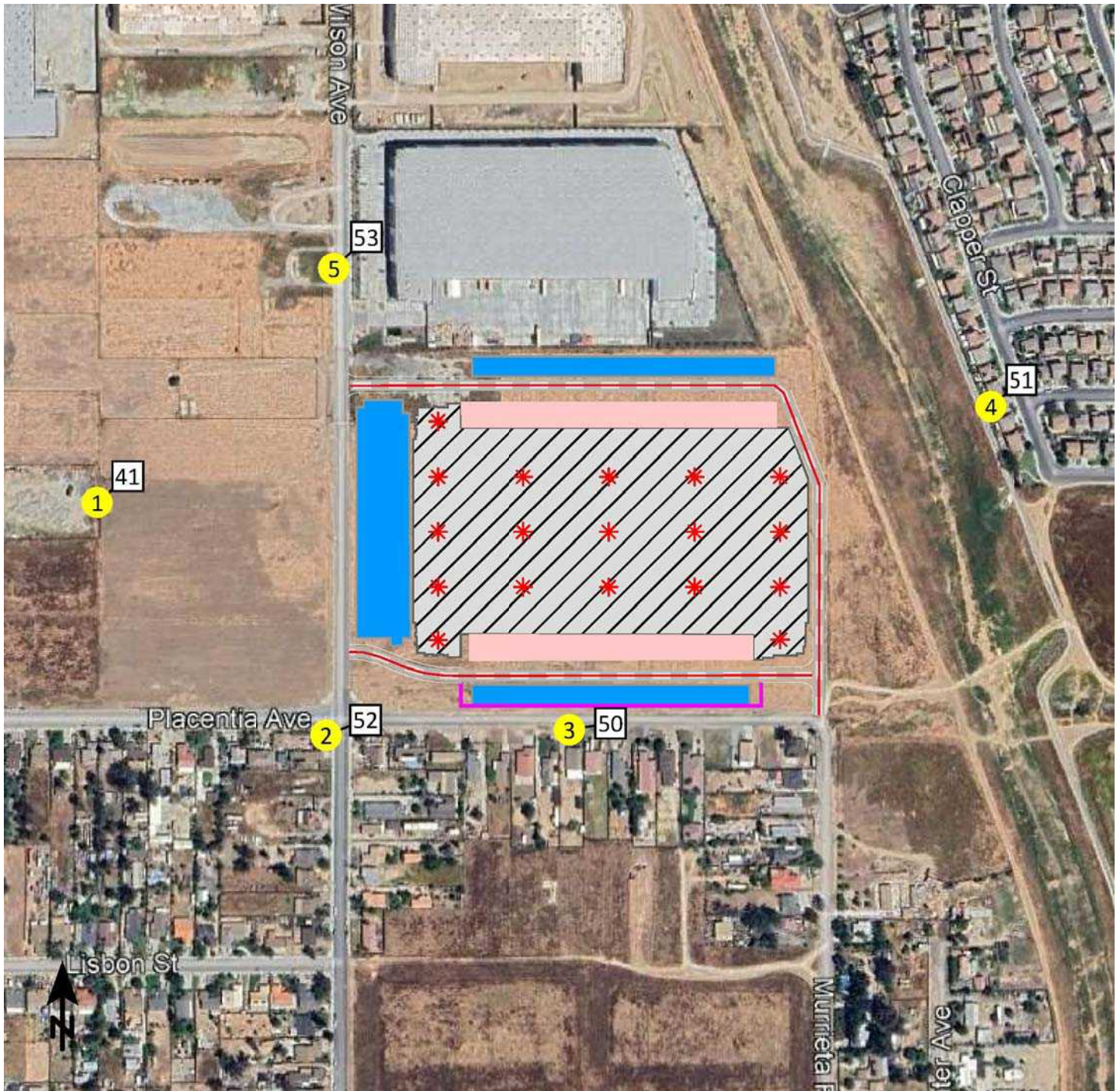
(2) See Table 2.

**Table 11**  
**Increase in Existing Noise Levels Due to Project Generated Vehicle Traffic (dBA CNEL)**








Roadway	Segment	Distance from roadway centerline to ROW (feet) <sup>1</sup>	Modeled Noise Levels at ROW (dBA CNEL) <sup>2</sup>				
			Existing (Without Project)	Existing Plus Project	Change in Noise Level	Exceeds Standards <sup>3</sup>	Increase of 3 dB or More?
Rider Street	West of Redlands Ave	47	72.8	72.8	0.0	Yes	No
	East of Redlands Ave	47	73.7	73.8	0.2	Yes	No
	West of Wilson Ave	47	73.6	73.8	0.2	Yes	No
	East of Wilson Ave	47	74.3	74.4	0.1	Yes	No
Placentia Avenue	West of Redlands Ave	64	68.9	69.5	0.6	Yes	No
	Redlands Ave to Wilson Ave	64	64.5	65.6	1.1	Yes	No
Redlands Avenue	North of Rider Street	47	69.9	70.2	0.3	Yes	No
	South of Placentia Ave	47	71.5	71.6	0.1	Yes	No
Wilson Avenue	South of Rider Street	33	62.3	64.9	2.6	Yes	No
	North of North Project Dwy	33	64.6	66.3	1.7	Yes	No
	North Project Dwy to Central Project Dwy	33	64.6	65.9	1.3	Yes	No
	Central Project Dwy to South Project Dwy	33	64.6	67.6	3.0	Yes	Yes
	South Project Dwy to Placentia Ave	33	64.6	66.3	1.7	Yes	Yes
	South of Placentia Ave	33	63.0	63.6	0.6	Yes	No

Notes:

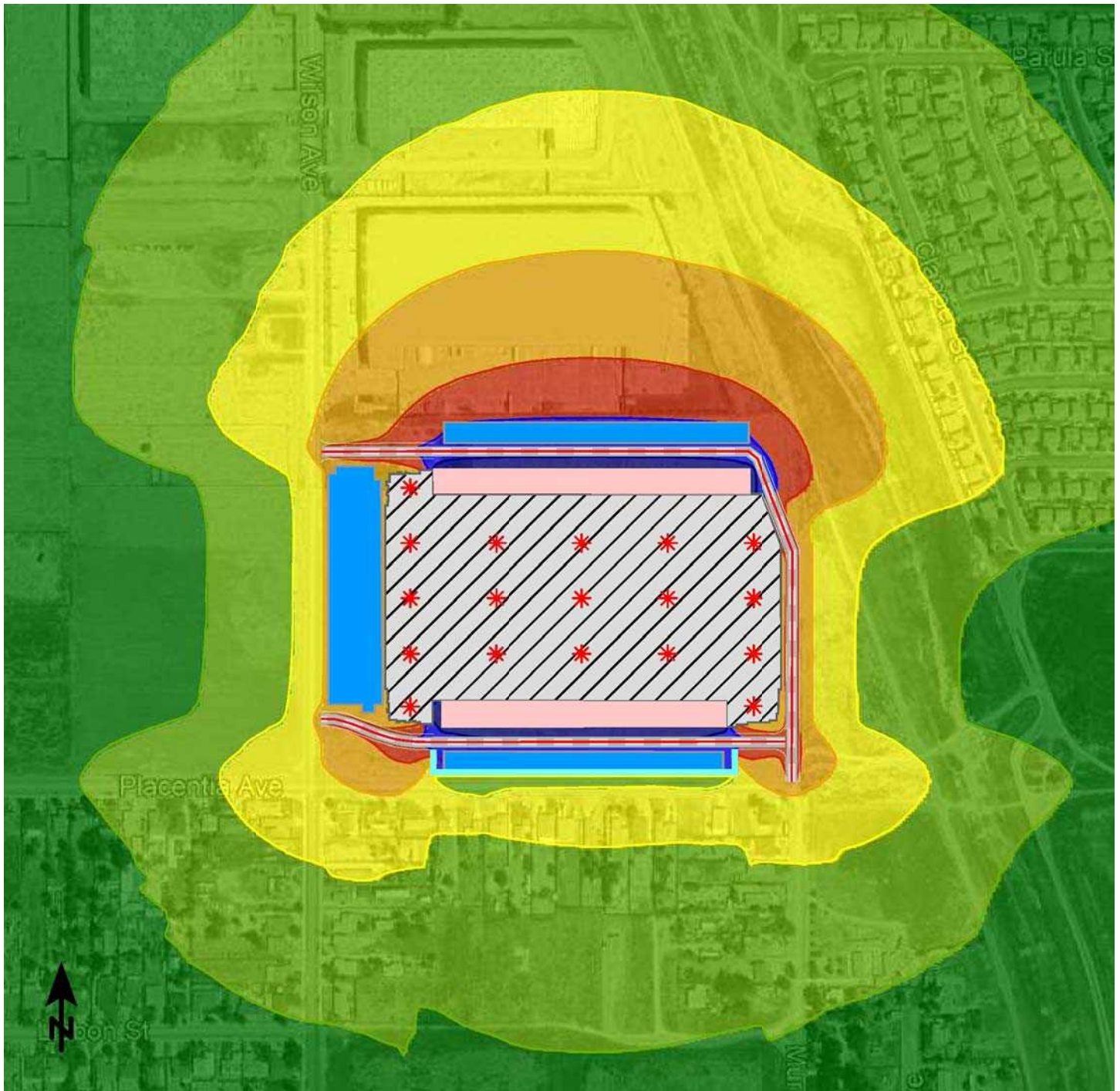
1. Right of way (ROW) per the City of Perris General Plan Circulation Element.
2. Exterior noise levels calculated 5 feet above pad elevation, perpendicular to subject roadway.
3. Per the City of Perris normally acceptable standard for single-family detached residential dwelling units (see Table 5).



**Signs and symbols**

-  Proposed Concrete Wall (14 ft)
-  Proposed Building
-  Receiver
-  Truck Drive
-  Point source (HVAC)
-  Area source (Loading/Unloading)
-  Parking lot

**Figure 7**  
**Project Operational Noise Levels (CNEL) - Alternative 1**



**Signs and symbols**

- Proposed Concrete Wall (14 ft)
- Proposed Building
- Truck Drive
- Point source (HVAC)
- Area source (Loading/Unloading)
- Parking lot








**Levels in dB(A) CNEL**

- < 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- >= 70

**Figure 8**  
**Project Operational Noise Contours (CNEL) - Alternative 1**








**Signs and symbols**

-  Proposed Building
-  Receiver
-  Truck Drive
-  Point source (HVAC)
-  Area source (Loading/Unloading)
-  Parking lot
-  Noise Level Tables (dBA, CNEL)







**Figure 9**  
**Project Operational Noise Levels (CNEL) - Alternative 2**



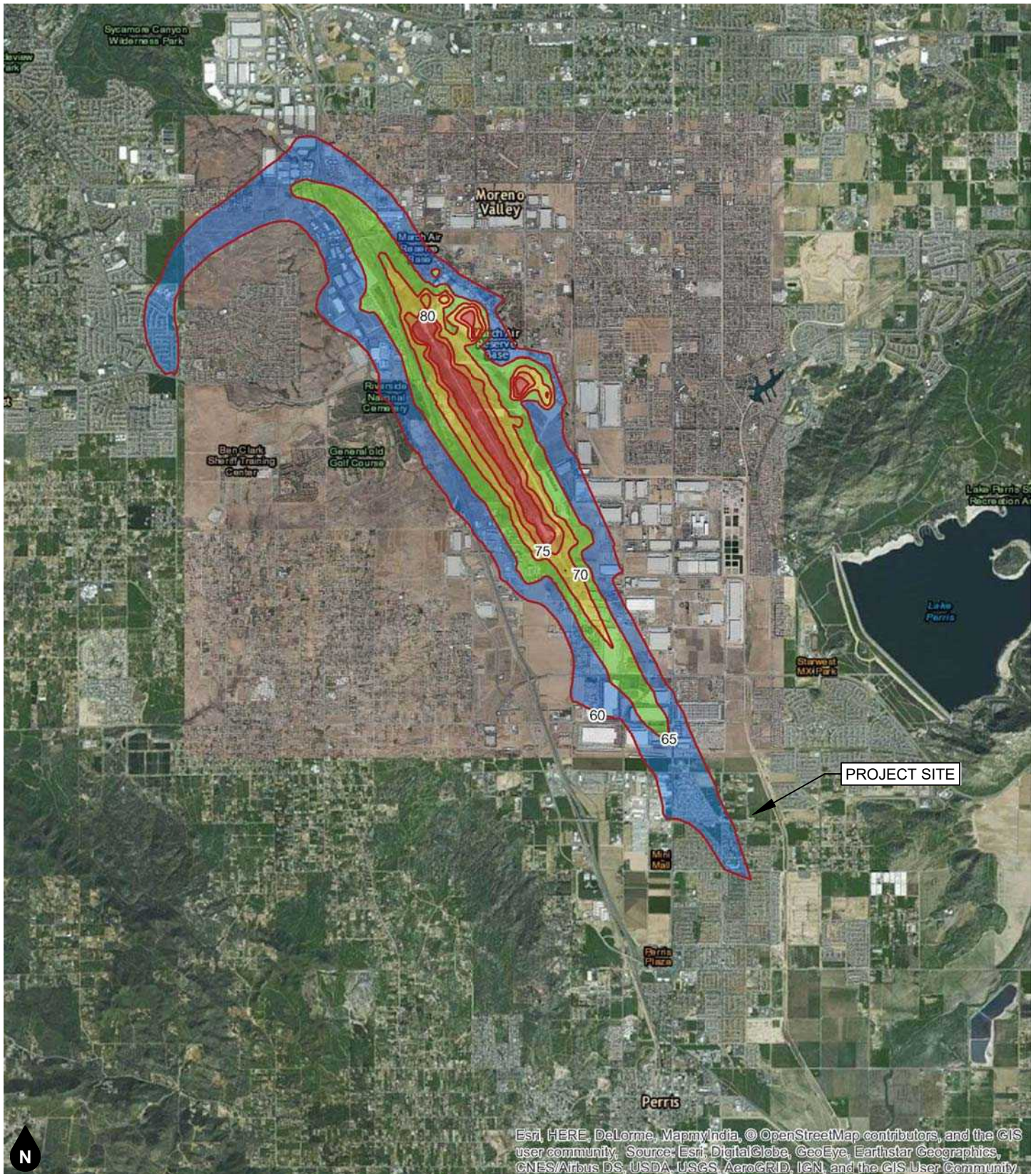
Signs and symbols

-  Proposed Building
-  Truck Drive
-  Point source (HVAC)
-  Area source (Loading/Unloading)
-  Parking lot

Levels in dB(A) CNEL

-  < 45
-  45 - 50
-  50 - 55
-  55 - 60
-  60 - 65
-  >= 70

**Figure 10**  
**Project Operational Noise Contours (CNEL) - Alternative 2**



Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community. Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

— March ARB 2018 Noise Contours

**Noise Contour Levels (CNEL)**

60dB 65dB 70dB 75dB 80dB

**Figure 11**  
**March ARB 2018 AICUZ Noise Contours**

## 7. REFERENCES

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### **California, State of, Department of Transportation**

2020 Transportation and Construction Vibration Guidance Manual. April.

### **California, State of, Building Code**

2019 Chapter 12, Section 1206.4 Allowable Interior Noise Levels

### **Environmental Protection Agency**

1974 "Information on Levels of Environmental Noise Requisite to Protect Public Health And Welfare with an Adequate Margin of Safety," EPA/ONAC 550/9-74-004, March, 1974.

### **Federal Transit Administration**

2018 Transit Noise and Vibration Impact Assessment Manual. Typical Construction Equipment Vibration Emissions.

### **Ganddini Group, Inc.**

2024 Placentia Avenue Industrial Traffic Impact Analysis. April 18.

### **Office of Planning and Research**

2017 State of California General Plan Guidelines

### **Perris, City of**

2005 City of Perris General Plan. August 30.

2020 City of Perris Municipal Code.

### **Riverside, County of**

2001 General Plan, Chapter 4, Figure C-3 "Link Volume Capacities/Level of Service for Riverside County Roadways."

2009 County of Riverside Industrial Hygiene Guidelines for Determining and Mitigating Traffic Noise Impacts to Residential Structures and County.

### **U.S. Department of Transportation**

2006 FHWA Roadway Construction Noise Model User's Guide. January.

## APPENDICES

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- Appendix A List of Acronyms
- Appendix B Glossary
- Appendix C Noise Measurement Field Worksheets
- Appendix D Construction Noise Model Worksheets
- Appendix E SoundPLAN Worksheets
- Appendix F FHWA Traffic Noise Model Worksheets
- Appendix G Groundborne Vibration Worksheets

**APPENDIX A**  
**LIST OF ACRONYMS**

Term	Definition
ADT	Average Daily Traffic
ANSI	American National Standard Institute
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
D/E/N	Day / Evening / Night
dB	Decibel
dBA or dB(A)	Decibel "A-Weighted"
dBA/DD	Decibel per Double Distance
dBA Leq	Average Noise Level over a Period of Time
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
L <sub>02</sub> ,L <sub>08</sub> ,L <sub>50</sub> ,L <sub>90</sub>	A-weighted Noise Levels at 2 percent, 8 percent, 50 percent, and 90 percent, respectively, of the time period
DNL	Day-Night Average Noise Level
Leq(x)	Equivalent Noise Level for "x" period of time
Leq	Equivalent Noise Level
L <sub>max</sub>	Maximum Level of Noise (measured using a sound level meter)
L <sub>min</sub>	Minimum Level of Noise (measured using a sound level meter)
L <sub>p</sub>	Sound pressure level
LOS C	Level of Service C
L <sub>w</sub>	Sound Power Level
OPR	California Governor's Office of Planning and Research
PPV	Peak Particle Velocities
RCNM	Road Construction Noise Model
REMEL	Reference Energy Mean Emission Level
RMS	Root Mean Square

## **APPENDIX B**

### **GLOSSARY**

Term	Definition
Ambient Noise Level	The all-encompassing noise environment associated with a given environment, at a specified time, usually a composite of sound from many sources, at many directions, near and far, in which usually no particular sound is dominant.
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear.
CNEL	Community Noise Equivalent Level. CNEL is a weighted 24-hour noise level that is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours.
Decibel, dB	A logarithmic unit of noise level measurement that relates the energy of a noise source to that of a constant reference level; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
DNL, Ldn	Day Night Level. The DNL, or Ldn is a weighted 24-hour noise level that is obtained by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the nighttime hours.
Equivalent Continuous Noise Level, $L_{eq}$	A level of steady state sound that in a stated time period, and a stated location, has the same A-weighted sound energy as the time-varying sound.
Fast/Slow Meter Response	The fast and slow meter responses are different settings on a sound level meter. The fast response setting takes a measurement every 100 milliseconds, while a slow setting takes one every second.
Frequency, Hertz	In a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., the number of cycles per second).
$L_{02}$ , $L_{08}$ , $L_{50}$ , $L_{90}$	The A-weighted noise levels that are equaled or exceeded by a fluctuating sound level, 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period, respectively.
$L_{max}$ , $L_{min}$	$L_{max}$ is the RMS (root mean squared) maximum level of a noise source or environment measured on a sound level meter, during a designated time interval, using fast meter response. $L_{min}$ is the minimum level.
Offensive/ Offending/Intrusive Noise	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of sound depends on its amplitude, duration, frequency, and time of occurrence, and tonal information content as well as the prevailing ambient noise level.
Root Mean Square (RMS)	A measure of the magnitude of a varying noise source quantity. The name derives from the calculation of the square root of the mean of the squares of the values. It can be calculated from either a series of lone values or a continuous varying function.

## **APPENDIX C**

### **NOISE MEASUREMENT FIELD WORKSHEETS**

**Noise Measurement  
Field Data**

**Project Name:** Placentia Avenue Industrial Project, City of Perris **Date:** March 16, 2023

**Project #:** 19484

**Noise Measurement #:** STNM1 Run Time: 15 minutes ( 1 x 15 minutes ) **Technician:** Ian Edward Gallagher

**Nearest Address or Cross Street:** 2865 Redlands Avenue, Perris, CA 92571

**Site Description (Type of Existing Land Use and any other notable features):** Measurement Site: Just west of residence 2865 Redlands Ave, Perris.

Adjacent: Redlands Ave (running N-S) adjacent to west with vacant land further west, Placentia Ave (running E-W) ~625' south, single-family residential use to east.

**Weather:** Overcast, grey clouds. Sunset: 6:58 PM **Settings:** SLOW FAST

**Temperature:** 56 deg F **Wind:** 2 mph **Humidity:** 67% **Terrain:** Flat

**Start Time:** 1:36 PM **End Time:** 1:31 PM **Run Time:** \_\_\_\_\_

**Leq:** 71.1 dB **Primary Noise Source:** Traffic noise from the 106 vehicles passing microphone on Redlands Ave.

**Lmax** 84.2 dB Traffic noise from vehicles traveling along Placentia Avenue.

**L2** 78.7 dB **Secondary Noise Sources:** Traffic ambiance from vehicles on other roads. Overhead air traffic, March ARB ~3

**L8** 76.2 dB miles NW of STNM1. Bird song. Some residential ambiance.

**L25** 72.4 dB

**L50** 65.8 dB

**NOISE METER:** SoundTrack LXT Class 1 **CALIBRATOR:** Larson Davis CA 250

**MAKE:** Larson Davis **MAKE:** Larson Davis

**MODEL:** LXT1 **MODEL:** CA 250

**SERIAL NUMBER:** 3099 **SERIAL NUMBER:** 2723

**FACTORY CALIBRATION DATE:** 11/17/2021 **FACTORY CALIBRATION DATE:** 11/18/2021

**FIELD CALIBRATION DATE:** 3/16/2023

Noise Measurement  
Field Data

PHOTOS:



STNM1 looking S down Redlands Avenue towards intersection with Placentia Ave (~625'). Residence 2865 Redlands Avenue on the left of image.



STNM1 looking N up Redlands Ave towards intersection with E Rider St (~1,950'). Residence 2865 Redlands Avenue on the right of image.

## Summary

File Name on Meter	LxT_Data.207.s
File Name on PC	LxT_0003099-20230316 131647-LxT_Data.207.ldbin
Serial Number	0003099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM1 33°49'29.05"N 117°13'2.08"W
Job Description	15 minute noise measurement ( 1 x 15 minutes )
Note	Ganddini 19484 Placentia Ave Industrial Project, City of Perris.

## Measurement

Start	2023-03-16 13:16:47
Stop	2023-03-16 13:31:47
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2023-03-16 13:16:01
Post-Calibration	None

## Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	C Weighting
OBA Max Spectrum	At LMax
Overload	124.5 dB

## Results

LAeq	71.1
LAE	100.7
EA	1.292 mPa <sup>2</sup> h
EA8	41.344 mPa <sup>2</sup> h
EA40	206.720 mPa <sup>2</sup> h
LApeak (max)	2023-03-16 13:31:41 102.1 dB
LASmax	2023-03-16 13:19:30 84.2 dB
LASmin	2023-03-16 13:26:54 39.2 dB

## Statistics

LCeq	74.5 dB	<b>LA2.00</b>	78.7 dB
LAeq	71.1 dB	<b>LA8.00</b>	76.2 dB
LCeq - LAeq	3.4 dB	<b>LA25.00</b>	72.4 dB
LAleq	73.9 dB	<b>LA50.00</b>	65.8 dB
LAeq	71.1 dB	<b>LA66.60</b>	59.7 dB
LAleq - LAeq	2.8 dB	<b>LA90.00</b>	45.5 dB
Overload Count	0		

# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.207.s	Computer's File Name	LxT_0003099-20230316 131647-LxT_Data.207.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM1 33°49'29.05"N 117°13'2.08"W
Job Description	15 minute noise measurement ( 1 x 15 minutes )		
Note	Ganddini 19484 Placentia Ave Industrial Project, City of Perris.		
Start Time	2023-03-16 13:16:47	Duration	0:15:00.0
End Time	2023-03-16 13:31:47	Run Time	0:15:00.0
		Pause Time	0:00:00.0

## Results

### Overall Metrics

L <sub>Aeq</sub>	71.1 dB		
L <sub>AE</sub>	100.7 dB	SEA	--- dB
EA	1.3 mPa <sup>2</sup> h	LAFTM5	76.7 dB
EA8	41.3 mPa <sup>2</sup> h		
EA40	206.7 mPa <sup>2</sup> h		
L <sub>Apeak</sub>	102.1 dB	2023-03-16 13:31:41	
L <sub>Smax</sub>	84.2 dB	2023-03-16 13:19:30	
L <sub>Smin</sub>	39.2 dB	2023-03-16 13:26:54	
L <sub>Aeq</sub>	71.1 dB		
L <sub>Ceq</sub>	74.5 dB	L <sub>Ceq</sub> - L <sub>Aeq</sub>	3.4 dB
L <sub>AIeq</sub>	73.9 dB	L <sub>AIeq</sub> - L <sub>Aeq</sub>	2.8 dB

### Exceedances

	Count	Duration
L <sub>S</sub> > 65.0 dB	33	0:08:31.2
L <sub>S</sub> > 85.0 dB	0	0:00:00.0
L <sub>Apeak</sub> > 135.0 dB	0	0:00:00.0
L <sub>Apeak</sub> > 137.0 dB	0	0:00:00.0
L <sub>Apeak</sub> > 140.0 dB	0	0:00:00.0

### Community Noise

<b>LDN</b>	<b>LDay</b>	<b>LNight</b>	
--- dB	--- dB	0.0 dB	
<b>LDEN</b>	<b>LDay</b>	<b>LEve</b>	<b>LNight</b>
--- dB	--- dB	--- dB	--- dB

### Any Data

	Level	A Time Stamp	Level	C Time Stamp	Level	Z Time Stamp
L <sub>eq</sub>	71.1 dB		74.5 dB		--- dB	
L <sub>S(max)</sub>	84.2 dB	2023-03-16 13:19:30	--- dB		--- dB	
L <sub>S(min)</sub>	39.2 dB	2023-03-16 13:26:54	--- dB		--- dB	
L <sub>Peak(max)</sub>	102.1 dB	2023-03-16 13:31:41	--- dB		--- dB	

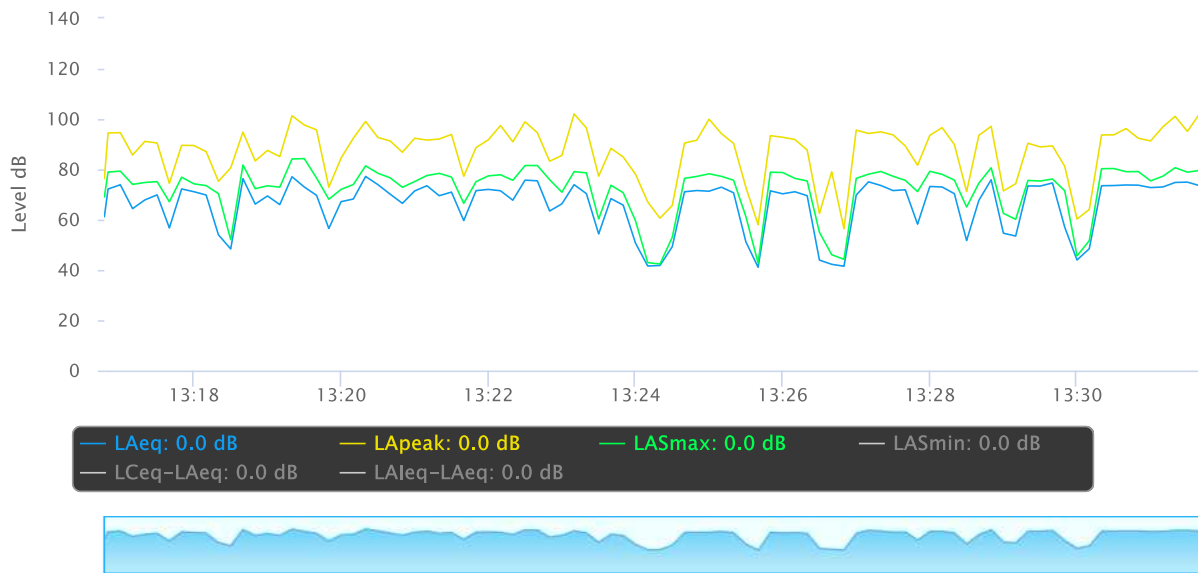
### Overloads

<b>Count</b>	<b>Duration</b>	<b>OBA Count</b>	<b>OBA Duration</b>
0	0:00:00.0	0	0:00:00.0

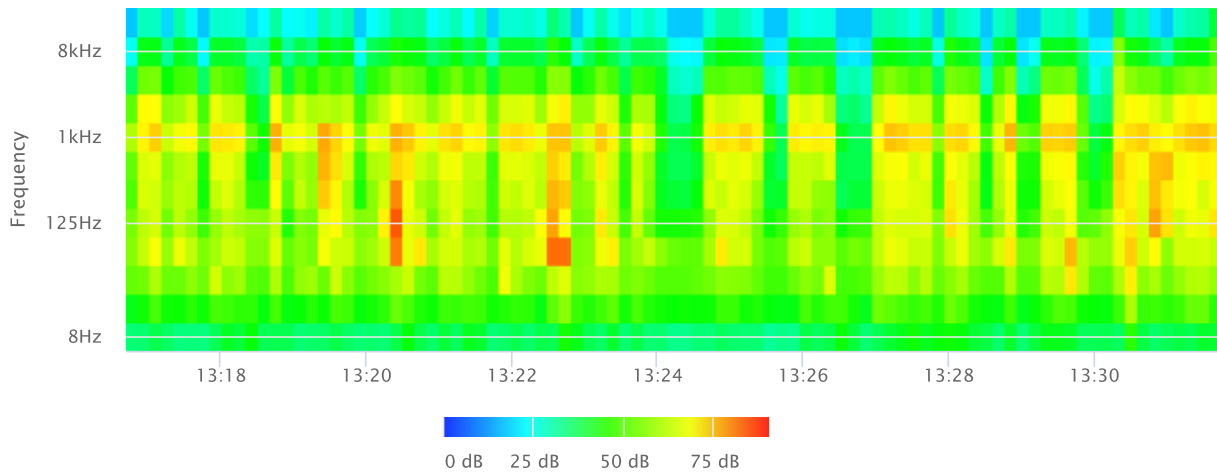
### Statistics

L <sub>S</sub> 2.0	78.7 dB
L <sub>S</sub> 8.0	76.2 dB
L <sub>S</sub> 25.0	72.4 dB
L <sub>S</sub> 50.0	65.8 dB
L <sub>S</sub> 66.6	59.7 dB
L <sub>S</sub> 90.0	45.5 dB

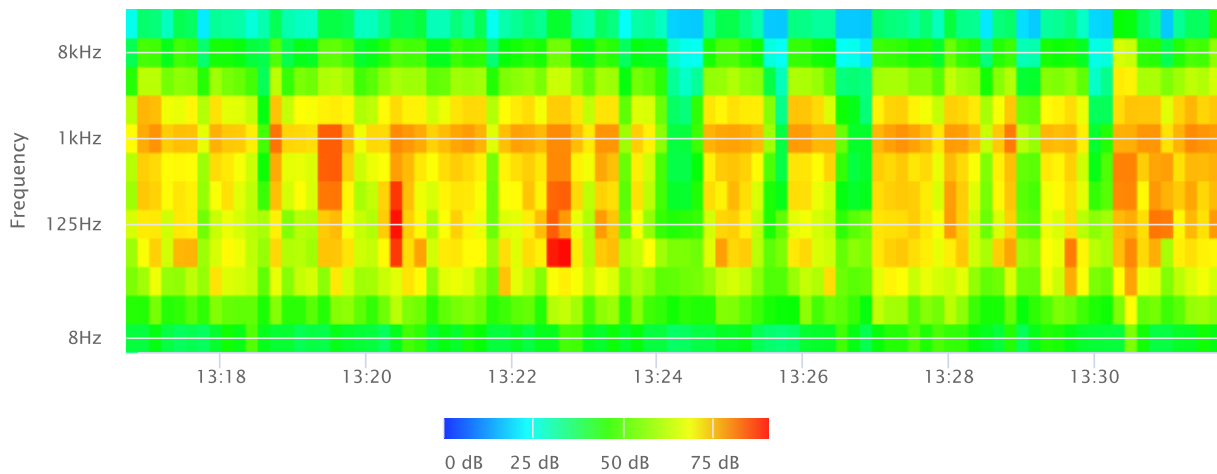
### Time History



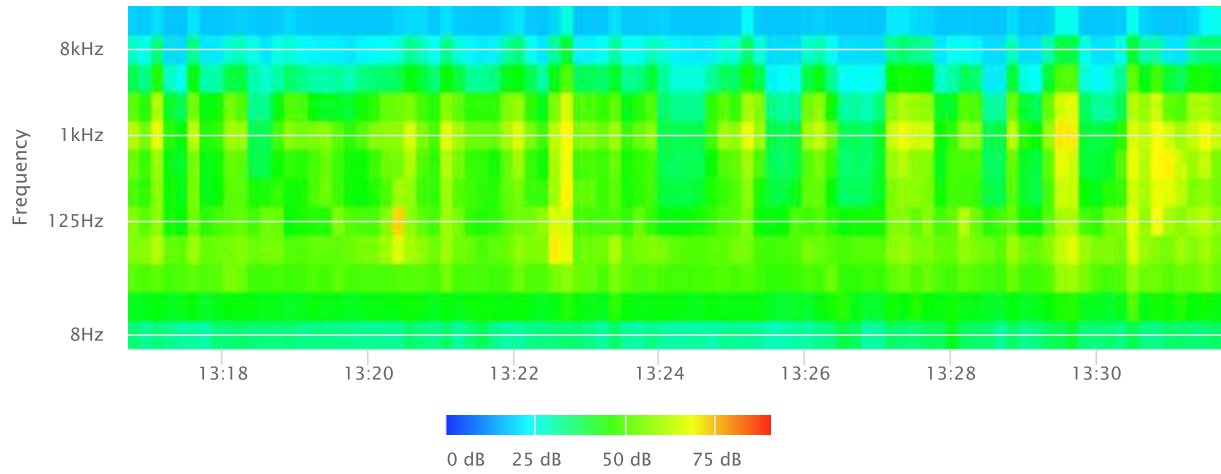
### OBA 1/1 Leq



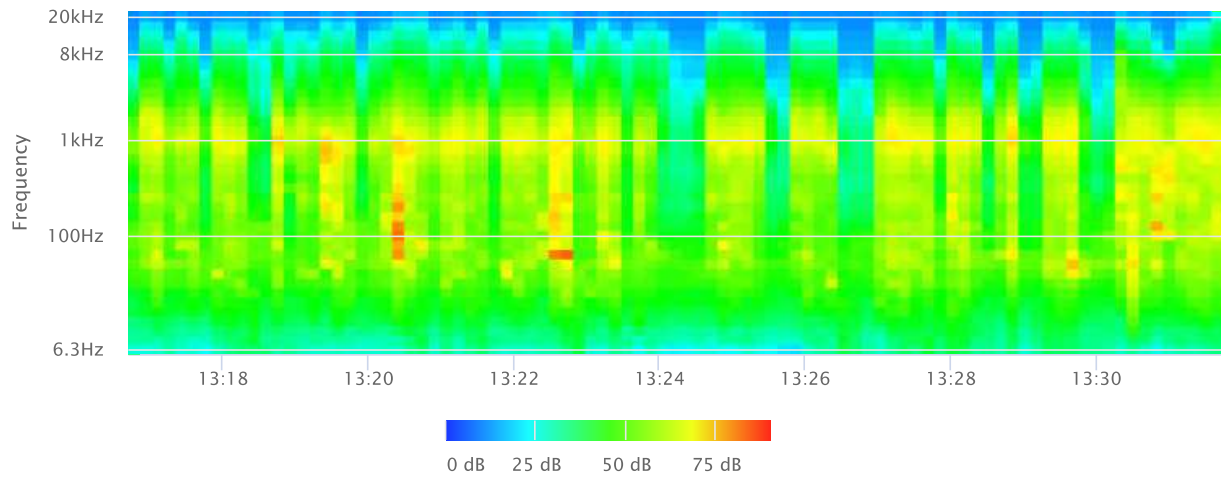
### OBA 1/1 Lmax



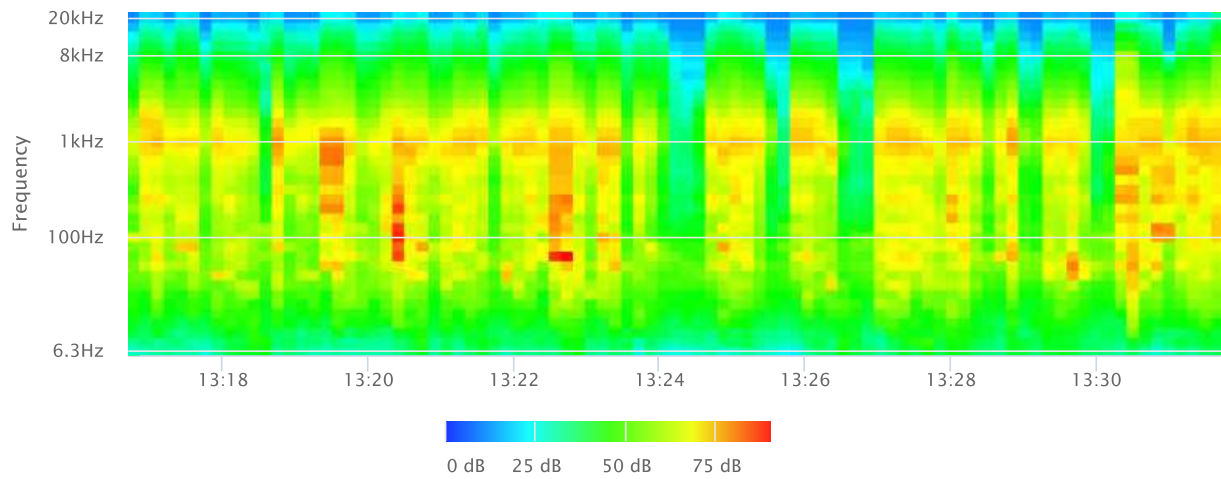
### OBA 1/1 Lmin



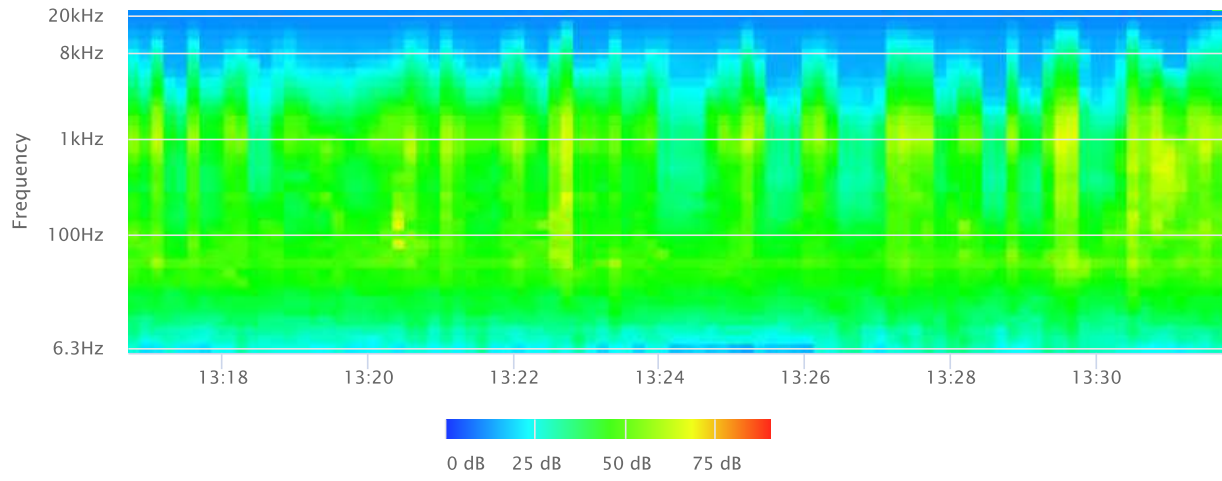
### OBA 1/3 Leq



### OBA 1/3 Lmax



# OBA 1/3 Lmin



**Noise Measurement  
Field Data**

**Project Name:** Placentia Avenue Industrial Project, City of Perris **Date:** March 16, 2023  
**Project #:** 19484  
**Noise Measurement #:** STNM2 Run Time: 15 minutes ( 1 x 15 minutes ) **Technician:** Ian Edward Gallagher  
**Nearest Address or Cross Street:** 2770 Wilson Avenue, Perris, CA 92571

**Site Description (Type of Existing Land Use and any other notable features):** Measurement Site: Just east of frontyard to residence 2770 Wilson Ave.  
Adjacent: Wilson Ave (running N-) adjacent to east with single-family residential further east, single-family residential adjacent to west, & Placentia Ave (running E-W)  
~220' north of STNM2.

**Weather:** Overcast, grey clouds. Sunset: 6:58 PM **Settings:** SLOW FAST  
**Temperature:** 56 deg F **Wind:** 2 mph **Humidity:** 67% **Terrain:** Flat  
**Start Time:** 1:59 PM **End Time:** 2:14 PM **Run Time:** \_\_\_\_\_  
**Leq:** 61.7 dB **Primary Noise Source:** Traffic noise from the 66 vehicles passing microphone on Wilson Ave.  
**Lmax** 79.3 dB Traffic noise from vehicles traveling along Placentia Avenue.  
**L2** 70.4 dB **Secondary Noise Sources:** Traffic ambiance from vehicles on other roads. Overhead air traffic, March ARB ~3  
**L8** 65.9 dB miles NW of STNM2. Bird song. Some residential ambiance.  
**L25** 60.7 dB  
**L50** 54.0 dB

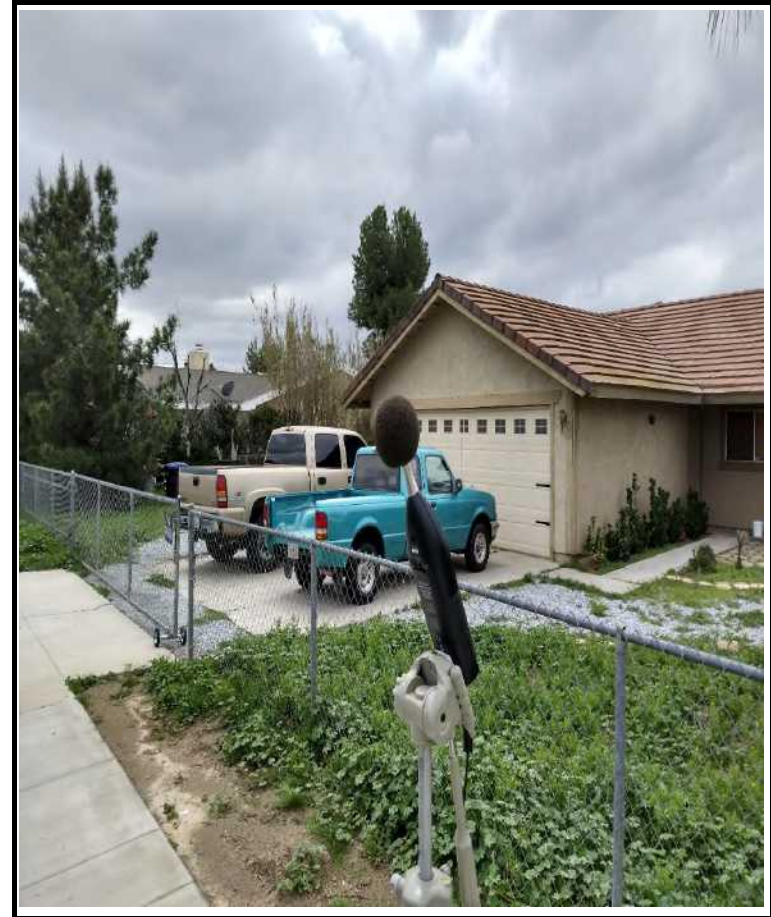
<b>NOISE METER:</b> <u>SoundTrack LXT Class 1</u>	<b>CALIBRATOR:</b> <u>Larson Davis CA 250</u>
<b>MAKE:</b> <u>Larson Davis</u>	<b>MAKE:</b> <u>Larson Davis</u>
<b>MODEL:</b> <u>LXT1</u>	<b>MODEL:</b> <u>CA 250</u>
<b>SERIAL NUMBER:</b> <u>3099</u>	<b>SERIAL NUMBER:</b> <u>2723</u>
<b>FACTORY CALIBRATION DATE:</b> <u>11/17/2021</u>	<b>FACTORY CALIBRATION DATE:</b> <u>11/18/2021</u>
<b>FIELD CALIBRATION DATE:</b> <u>3/16/2023</u>	

Noise Measurement  
Field Data

PHOTOS:



STNM2 looking E across Wilson Avenue towards residence 2771 Wilson Avenue.



STNM2 looking SW towards frontyard & driveway to residence 2770 Wilson Avenue, Perris.

## Summary

File Name on Meter	LxT_Data.209.s
File Name on PC	LxT_0003099-20230316 135929-LxT_Data.209.lbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM2 33°49'20.26"N 117°12'47.14"W
Job Description	15 minute noise measurement ( 1 x 15 minutes )
Note	Ganddini 19484 Placentia Ave Industrial Project, City of Perris.

## Measurement

Start	2023-03-16 13:59:29
Stop	2023-03-16 14:14:29
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2023-03-16 13:56:53
Post-Calibration	None

## Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	C Weighting
OBA Max Spectrum	At LMax
Overload	122.9 dB

## Results

LAeq	61.7
LAE	91.3
EA	148.4737 $\mu\text{Pa}^2\text{h}$
EA8	4.751157 $\text{mPa}^2\text{h}$
EA40	23.75579 $\text{mPa}^2\text{h}$
LApeak (max)	2023-03-16 14:00:43 99.8 dB
LASmax	2023-03-16 14:07:53 79.3 dB
LASmin	2023-03-16 14:13:47 40.0 dB

## Statistics

LCeq	70.8 dB	<b>LA2.00</b>	70.4 dB
LAeq	61.7 dB	<b>LA8.00</b>	65.9 dB
LCeq - LAeq	9.1 dB	<b>LA25.00</b>	60.7 dB
LAleq	64.9 dB	<b>LA50.00</b>	54.0 dB
LAeq	61.7 dB	<b>LA66.60</b>	50.3 dB
LAleq - LAeq	3.2 dB	<b>LA90.00</b>	45.2 dB
Overload Count	0		

# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.209.s	Computer's File Name	LxT_0003099-20230316 135929-LxT_Data.209.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM2 33°49'20.26"N 117°12'47.14"W
Job Description	15 minute noise measurement ( 1 x 15 minutes )		
Note	Ganddini 19484 Placentia Ave Industrial Project, City of Perris.		
Start Time	2023-03-16 13:59:29	Duration	0:15:00.0
End Time	2023-03-16 14:14:29	Run Time	0:15:00.0
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	61.7 dB		
LAE	91.3 dB	SEA	--- dB
EA	148.5 µPa²h	LAFTM5	67.9 dB
EA8	4.8 mPa²h		
EA40	23.8 mPa²h		
LA <sub>peak</sub>	99.8 dB	2023-03-16 14:00:43	
LAS <sub>max</sub>	79.3 dB	2023-03-16 14:07:53	
LAS <sub>min</sub>	40.0 dB	2023-03-16 14:13:47	
LA <sub>eq</sub>	61.7 dB		
LC <sub>eq</sub>	70.8 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	9.1 dB
LAI <sub>eq</sub>	64.9 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	3.2 dB

### Exceedances

	Count	Duration
LAS > 65.0 dB	27	0:01:55.10
LAS > 85.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 135.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 137.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 140.0 dB	0	0:00:00.0

### Community Noise

<b>LDN</b>	<b>LDay</b>	<b>LNight</b>	
--- dB	--- dB	0.0 dB	
<b>LDEN</b>	<b>LDay</b>	<b>LEve</b>	<b>LNight</b>
--- dB	--- dB	--- dB	--- dB

### Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L <sub>eq</sub>	61.7 dB		70.8 dB		--- dB	
LS <sub>(max)</sub>	79.3 dB	2023-03-16 14:07:53	--- dB		--- dB	
LS <sub>(min)</sub>	40.0 dB	2023-03-16 14:13:47	--- dB		--- dB	
L <sub>Peak(max)</sub>	99.8 dB	2023-03-16 14:00:43	--- dB		--- dB	

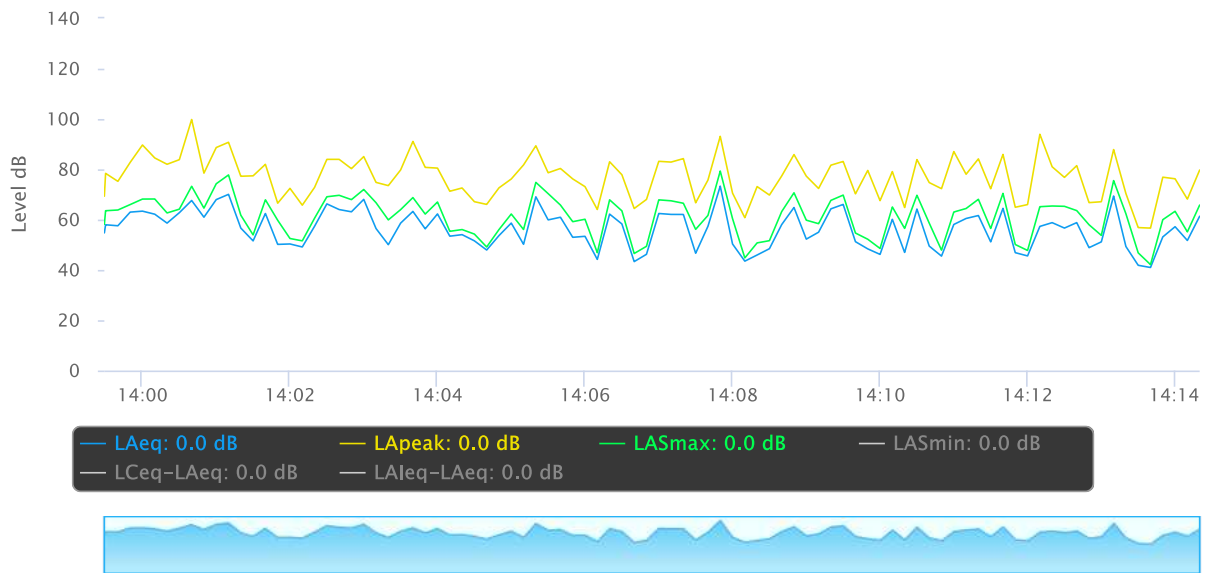
### Overloads

<b>Count</b>	<b>Duration</b>	<b>OBA Count</b>	<b>OBA Duration</b>
0	0:00:00.0	0	0:00:00.0

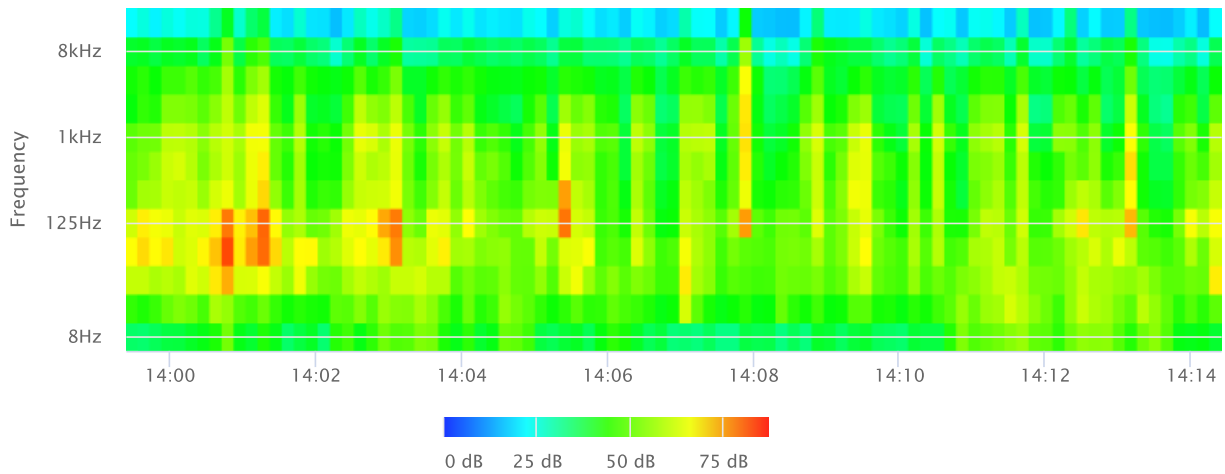
### Statistics

LAS 2.0	70.4 dB
LAS 8.0	65.9 dB
LAS 25.0	60.7 dB
LAS 50.0	54.0 dB
LAS 66.6	50.3 dB
LAS 90.0	45.2 dB

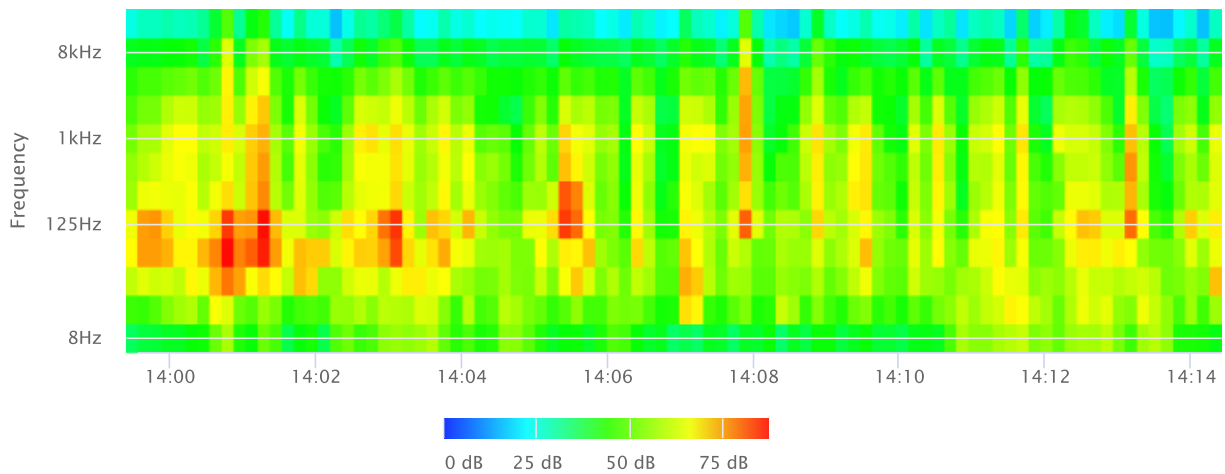
## Time History



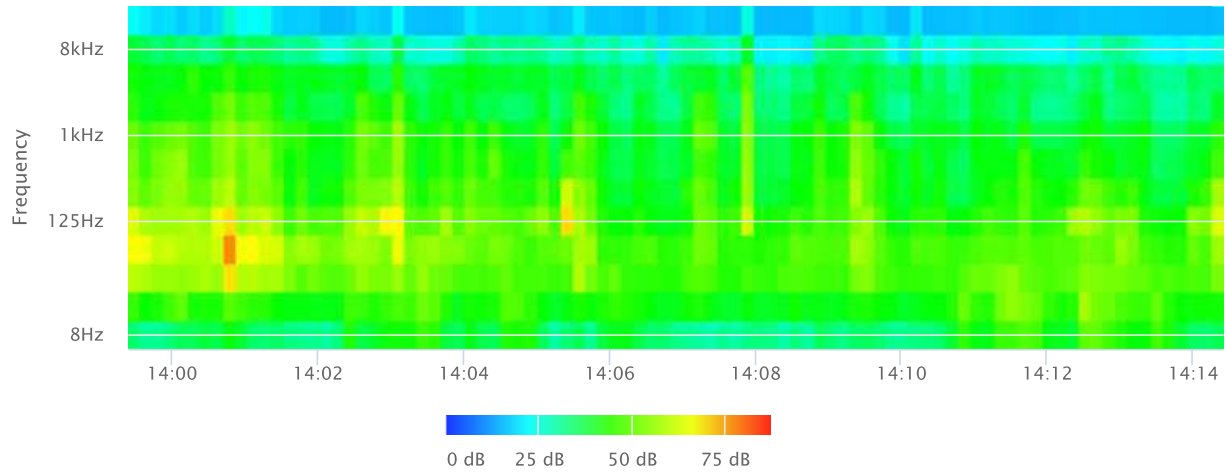
## OBA 1/1 Leq



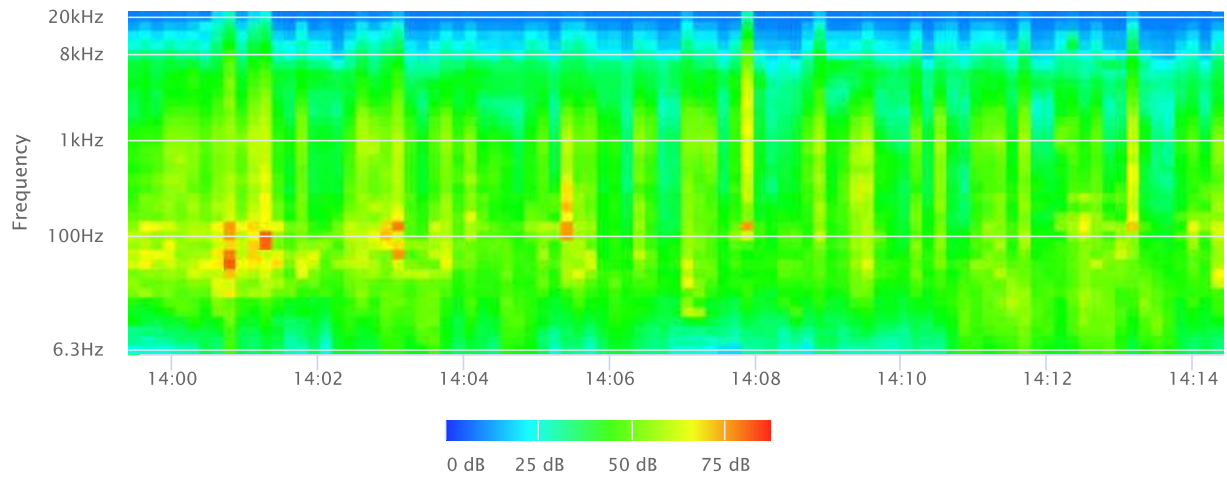
## OBA 1/1 Lmax



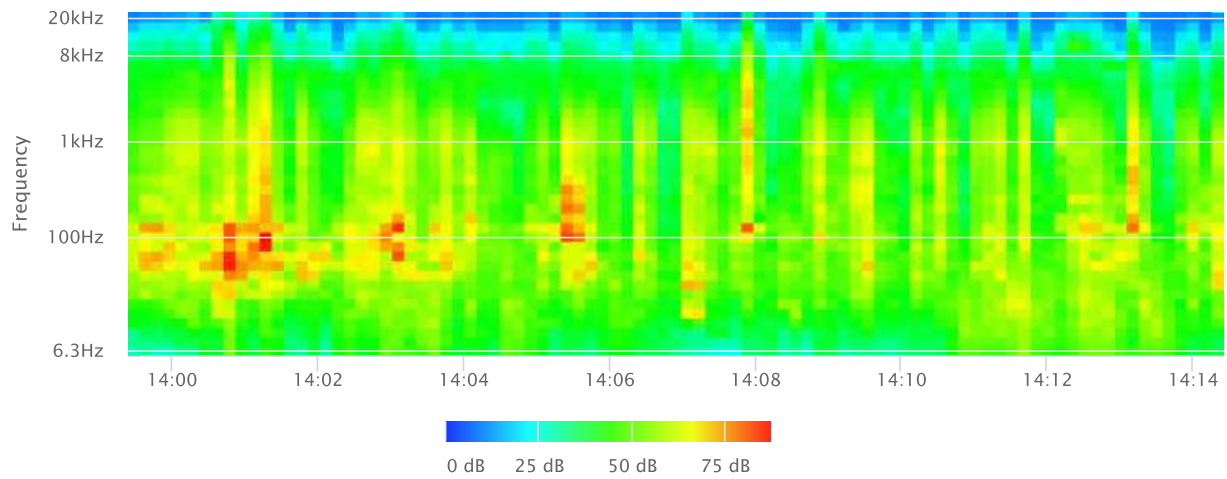
### OBA 1/1 Lmin



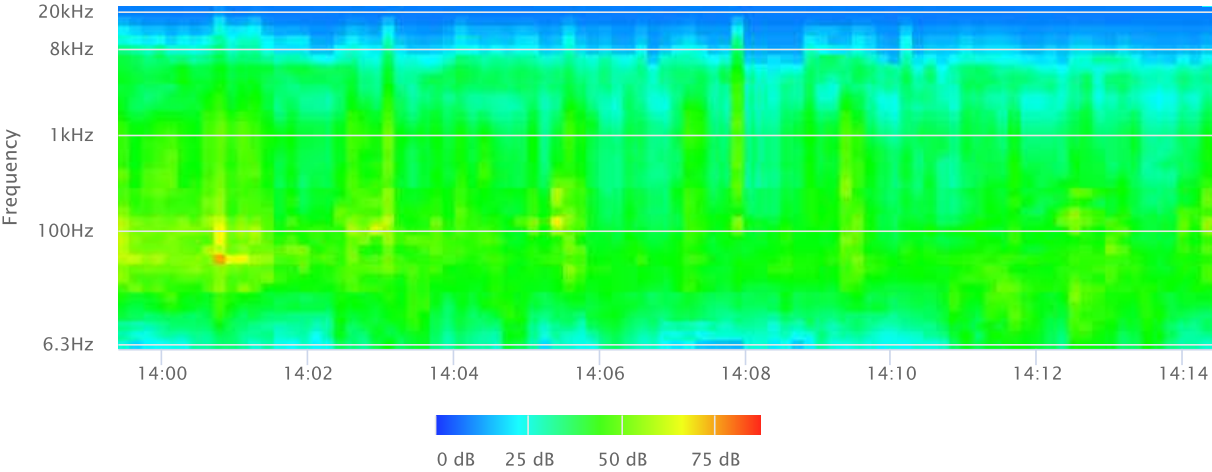
### OBA 1/3 Leq



### OBA 1/3 Lmax



OBA 1/3 Lmin



**Noise Measurement  
Field Data**

**Project Name:** Placentia Avenue Industrial Project, City of Perris **Date:** March 16, 2023  
**Project #:** 19484  
**Noise Measurement #:** STNM3 Run Time: 15 minutes ( 1 x 15 minutes ) **Technician:** Ian Edward Gallagher  
**Nearest Address or Cross Street:** 691 Placentia Avenue, Perris, CA 92571

**Site Description (Type of Existing Land Use and any other notable features):** Measurement Site: Just N of frontyard to residence 691 Placentia Ave.  
Adjacent: Placentia Ave (running E-W) adjacent to north with vacant project site further north, Wilson Ave (running N-S) ~630' west, single family residences to south, of STNM3.

**Weather:** Overcast, grey clouds. Sunset: 6:58 PM **Settings:** SLOW FAST

**Temperature:** 56 deg F **Wind:** 2 mph **Humidity:** 67% **Terrain:** Flat

**Start Time:** 2:30 PM **End Time:** 2:45 PM **Run Time:** \_\_\_\_\_

**Leq:** 65.4 dB **Primary Noise Source:** Traffic noise from the 33 vehicles passing microphone on Placentia Ave.

**Lmax** 83.7 dB Traffic ambiance from vehicles traveling along Wilson Avenue.

**L2** 75.3 dB **Secondary Noise Sources:** Traffic ambiance from vehicles on other roads. Overhead air traffic, March ARB ~3

**L8** 70.9 dB miles NW of STNM3. Bird song. Some residential ambiance.

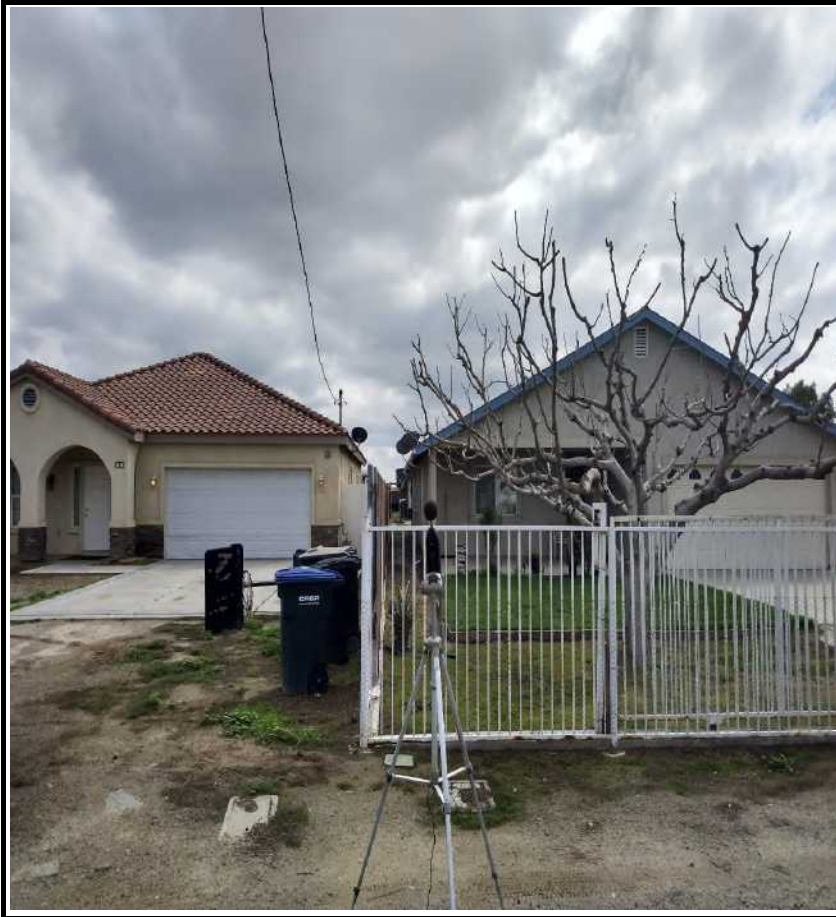
**L25** 61.7 dB

**L50** 49.9 dB

<b>NOISE METER:</b> <u>SoundTrack LXT Class 1</u>	<b>CALIBRATOR:</b> <u>Larson Davis CA 250</u>
<b>MAKE:</b> <u>Larson Davis</u>	<b>MAKE:</b> <u>Larson Davis</u>
<b>MODEL:</b> <u>LXT1</u>	<b>MODEL:</b> <u>CA 250</u>
<b>SERIAL NUMBER:</b> <u>3099</u>	<b>SERIAL NUMBER:</b> <u>2723</u>
<b>FACTORY CALIBRATION DATE:</b> <u>11/17/2021</u>	<b>FACTORY CALIBRATION DATE:</b> <u>11/18/2021</u>
<b>FIELD CALIBRATION DATE:</b> <u>3/16/2023</u>	

Noise Measurement  
Field Data

PHOTOS:



STNM3 looking south at residences 691 & 711 Placentia Avenue, Perris.



STNM3 looking W down Placentia Avenue towards intersetion with Wilson Ave (~630'). Residence 691 Placentia Avenue on left of image.

## Summary

File Name on Meter	LxT_Data.210.s
File Name on PC	LxT_0003099-20230316 143043-LxT_Data.210.ldbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM3 33°49'22.43"N 117°12'39.05"W
Job Description	15 minute noise measurement ( 1 x 15 minutes )
Note	Ganddini 19484 Placentia Ave Industrial Project, City of Perris.

## Measurement

Start	2023-03-16 14:30:43
Stop	2023-03-16 14:45:43
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2023-03-16 14:30:21
Post-Calibration	None

## Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	C Weighting
OBA Max Spectrum	At LMax
Overload	122.6 dB

## Results

LAeq	65.4
LAE	94.9
EA	345.3466 µPa²h
EA8	11.05109 mPa²h
EA40	55.25546 mPa²h
LApeak (max)	2023-03-16 14:37:50 98.8 dB
LASmax	2023-03-16 14:37:51 83.7 dB
LASmin	2023-03-16 14:37:27 37.2 dB

## Statistics

LCeq	69.7 dB	<b>LA2.00</b>	75.3 dB
LAeq	65.4 dB	<b>LA8.00</b>	70.9 dB
LCeq - LAeq	4.3 dB	<b>LA25.00</b>	61.7 dB
LALeq	68.3 dB	<b>LA50.00</b>	49.9 dB
LAeq	65.4 dB	<b>LA66.60</b>	44.4 dB
LALeq - LAeq	2.9 dB	<b>LA90.00</b>	40.9 dB
Overload Count	0		

# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.210.s	Computer's File Name	LxT_0003099-20230316 143043-LxT_Data.210.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM3 33°49'22.43"N 117°12'39.05"W
Job Description	15 minute noise measurement ( 1 x 15 minutes )		
Note	Ganddini 19484 Placentia Ave Industrial Project, City of Perris.		
Start Time	2023-03-16 14:30:43	Duration	0:15:00.0
End Time	2023-03-16 14:45:43	Run Time	0:15:00.0
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	65.4 dB		
LAE	94.9 dB	SEA	--- dB
EA	345.3 µPa²h	LAFTM5	71.9 dB
EA8	11.1 mPa²h		
EA40	55.3 mPa²h		
LA <sub>peak</sub>	98.8 dB	2023-03-16 14:37:50	
LAS <sub>max</sub>	83.7 dB	2023-03-16 14:37:51	
LAS <sub>min</sub>	37.2 dB	2023-03-16 14:37:27	
LA <sub>eq</sub>	65.4 dB		
LC <sub>eq</sub>	69.7 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	4.3 dB
LAI <sub>eq</sub>	68.3 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	2.9 dB

### Exceedances

	Count	Duration
LAS > 65.0 dB	27	0:03:19.1
LAS > 85.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 135.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 137.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 140.0 dB	0	0:00:00.0

### Community Noise

<b>LDN</b>	<b>LDay</b>	<b>LNight</b>	
--- dB	--- dB	0.0 dB	
<b>LDEN</b>	<b>LDay</b>	<b>LEve</b>	<b>LNight</b>
--- dB	--- dB	--- dB	--- dB

### Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L <sub>eq</sub>	65.4 dB		69.7 dB		--- dB	
LS <sub>(max)</sub>	83.7 dB	2023-03-16 14:37:51	--- dB		--- dB	
LS <sub>(min)</sub>	37.2 dB	2023-03-16 14:37:27	--- dB		--- dB	
L <sub>Peak(max)</sub>	98.8 dB	2023-03-16 14:37:50	--- dB		--- dB	

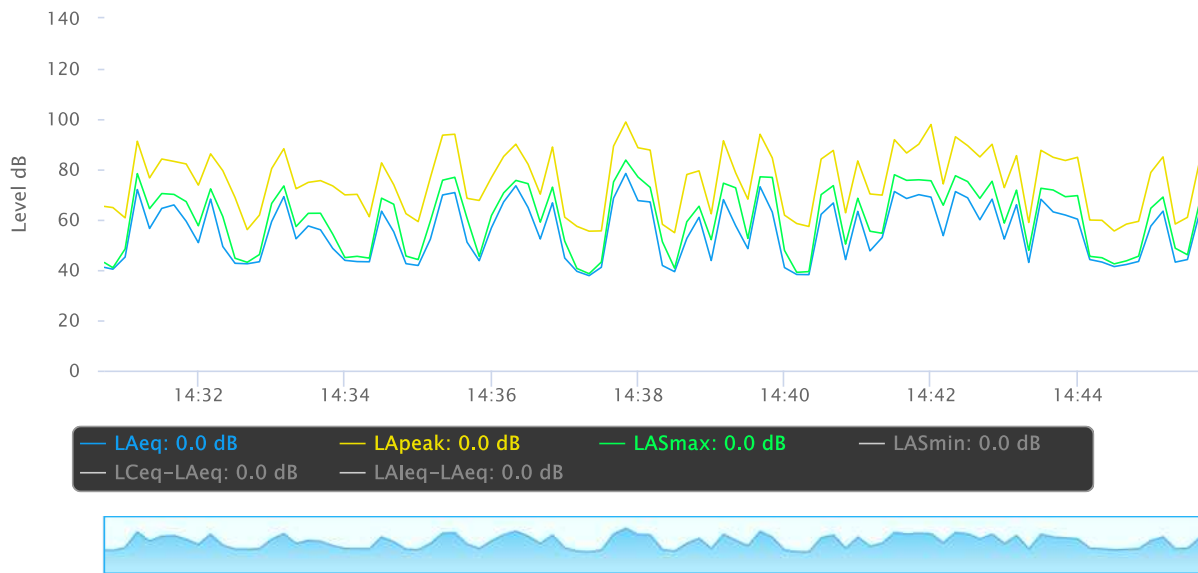
### Overloads

<b>Count</b>	<b>Duration</b>	<b>OBA Count</b>	<b>OBA Duration</b>
0	0:00:00.0	0	0:00:00.0

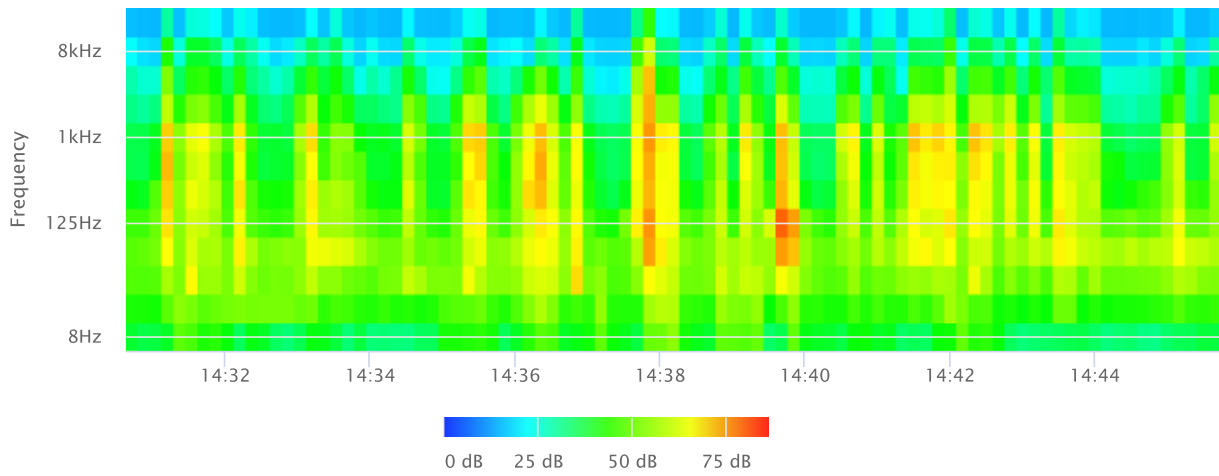
### Statistics

LAS 2.0	75.3 dB
LAS 8.0	70.9 dB
LAS 25.0	61.7 dB
LAS 50.0	49.9 dB
LAS 66.6	44.4 dB
LAS 90.0	40.9 dB

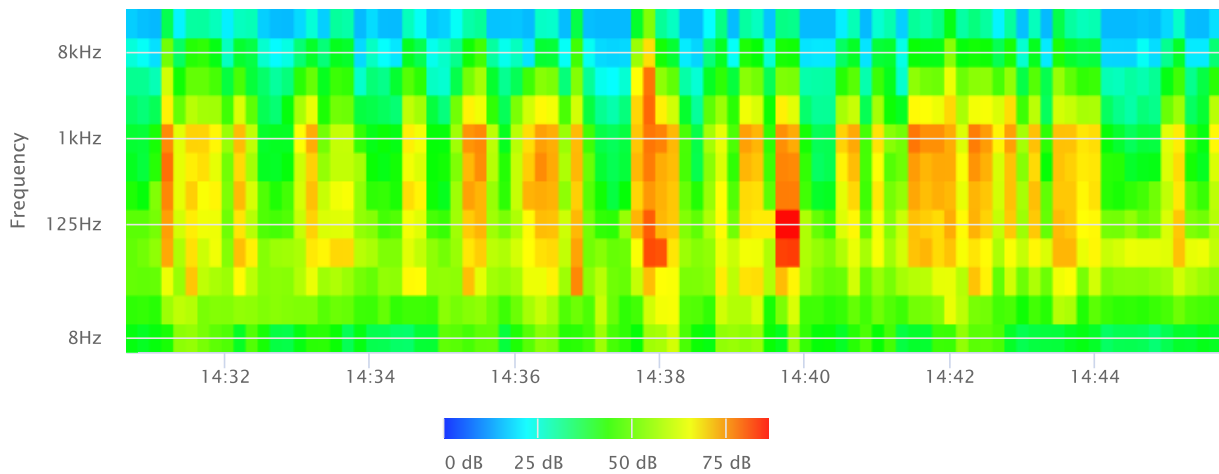
### Time History



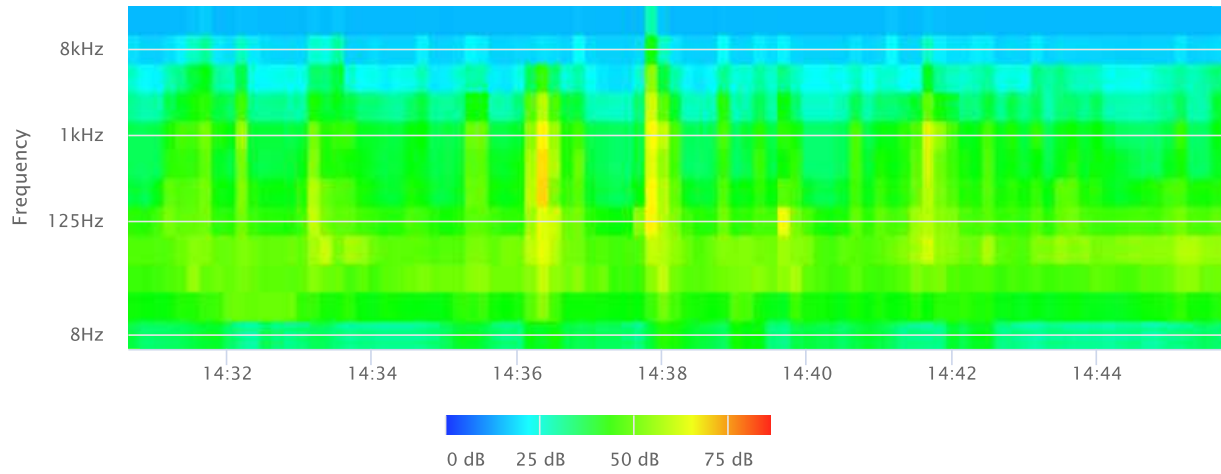
### OBA 1/1 Leq



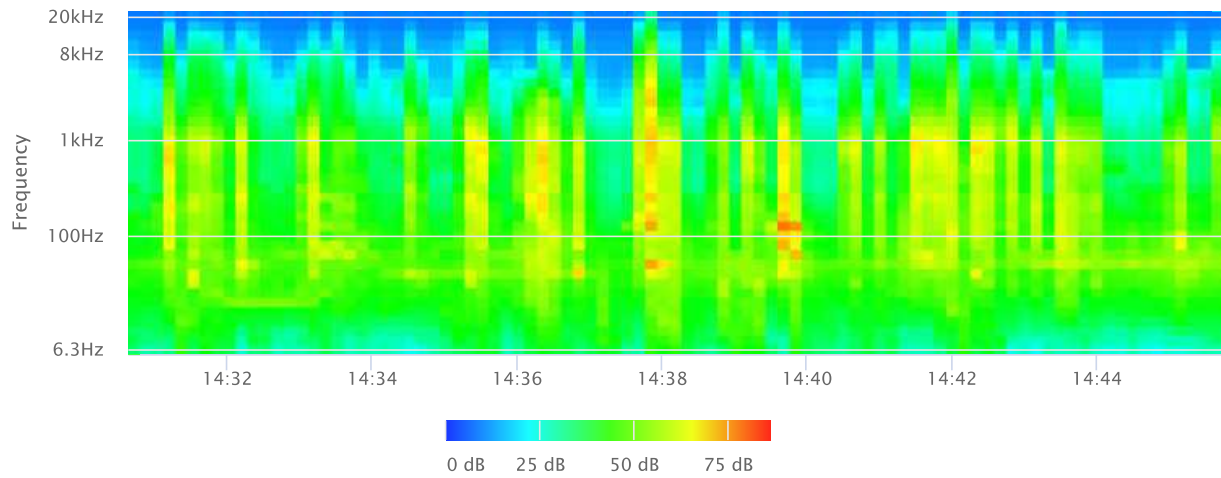
### OBA 1/1 Lmax



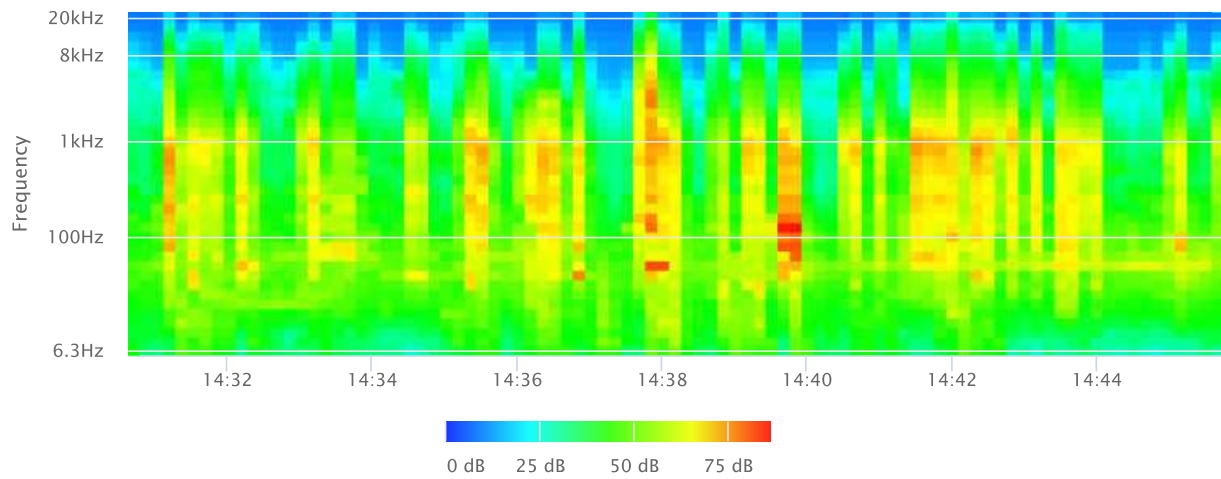
### OBA 1/1 Lmin



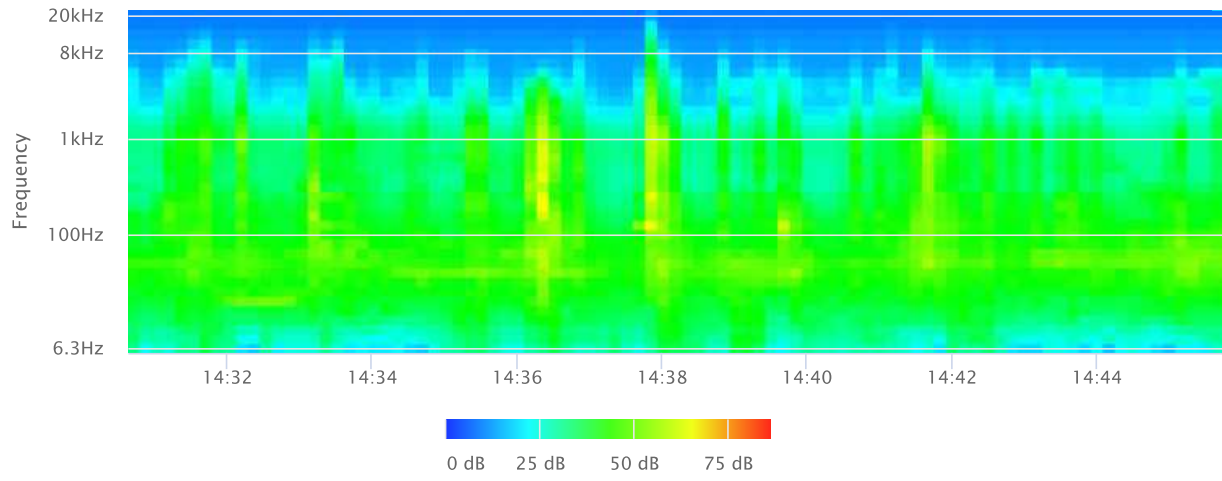
### OBA 1/3 Leq



### OBA 1/3 Lmax



# OBA 1/3 Lmin



**Noise Measurement  
Field Data**

**Project Name:** Placentia Avenue Industrial Project, City of Perris **Date:** March 16, 2023

**Project #:** 19484

**Noise Measurement #:** STNM4 Run Time: 15 minutes ( 1 x 15 minutes ) **Technician:** Ian Edward Gallagher

**Nearest Address or Cross Street:** 2980 Clapper Street, Perris, CA 92571

**Site Description (Type of Existing Land Use and any other notable features):** Measurement Site: Just WSW of backyard to residence 2980 Clapper St.

Adjacent: Bike path (running NNW- SSE) adjacent to east with single-family residential further east, vacant land to west of STNM4.

**Weather:** Overcast, grey clouds. Sunset: 6:58 PM **Settings:** SLOW FAST

**Temperature:** 56 deg F **Wind:** 2 mph **Humidity:** 67% **Terrain:** Flat

**Start Time:** 3:29 PM **End Time:** 3:44 PM **Run Time:** \_\_\_\_\_

**Leq:** 60.8 dB **Primary Noise Source:** Traffic ambianc from vehicles traveling on Wilson Ave, Redlands Ave, Placentia

**Lmax** 84.4 dB Ave, Evans Road & other surrounding roads.

**L2** 68.2 dB **Secondary Noise Sources:** Overhead air traffic, March ARB ~3 miles NW of STNM4. Bird song, residential

**L8** 58.2 dB ambiance ( backyard dogs ). Quad driveby on bike path at 3:31PM.

**L25** 47.3 dB

**L50** 42.5 dB

**NOISE METER:** SoundTrack LXT Class 1 **CALIBRATOR:** Larson Davis CA 250

**MAKE:** Larson Davis **MAKE:** Larson Davis

**MODEL:** LXT1 **MODEL:** CA 250

**SERIAL NUMBER:** 3099 **SERIAL NUMBER:** 2723

**FACTORY CALIBRATION DATE:** 11/17/2021 **FACTORY CALIBRATION DATE:** 11/18/2021

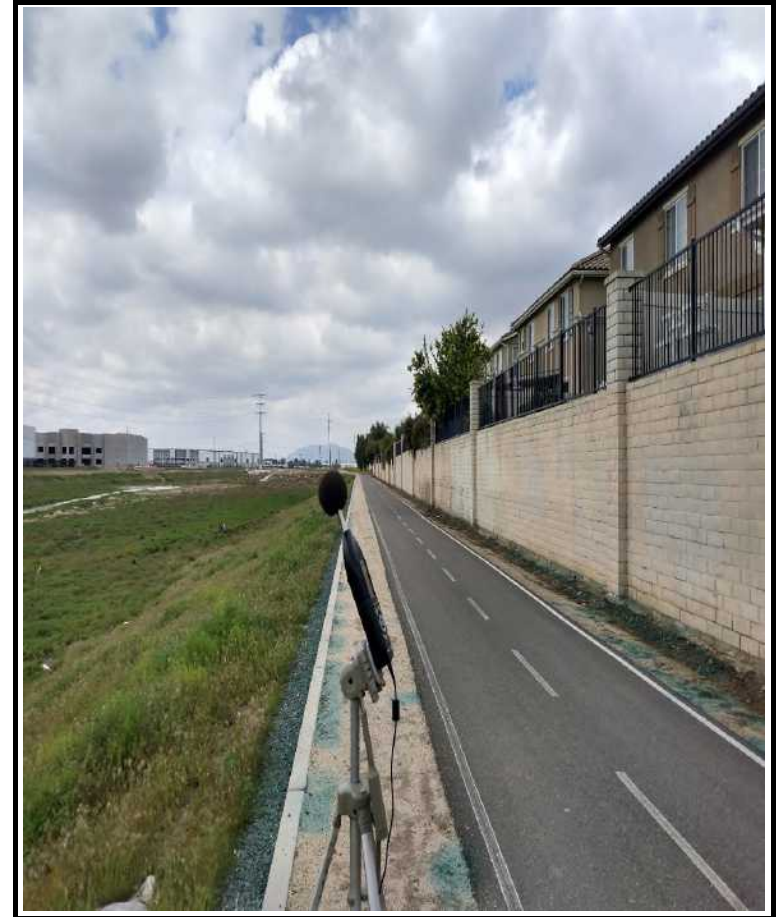
**FIELD CALIBRATION DATE:** 3/16/2023

Noise Measurement  
Field Data

PHOTOS:



STNM4 looking ENE towards retaining wall to backyard of residence 2980 Clapper Street, Perris. Wall is ~10' high and ~20' from microphone.



STNM4 looking NNW along bike path with vacant land on left of image & residential on right of image.

## Summary

File Name on Meter	LxT_Data.211.s
File Name on PC	LxT_0003099-20230316 152934-LxT_Data.211.ldbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM4 33°49'30.83"N 117°12'26.16"W
Job Description	15 minute noise measurement ( 1 x 15 minutes )
Note	Ganddini 19484 Placentia Ave Industrial Project, City of Perris.

## Measurement

Start	2023-03-16 15:29:34
Stop	2023-03-16 15:44:34
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2023-03-16 15:23:35
Post-Calibration	None

## Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	C Weighting
OBA Max Spectrum	At LMax
Overload	122.6 dB

## Results

LAeq	60.8
LAE	90.3
EA	120.2741 µPa²h
EA8	3.848771 mPa²h
EA40	19.24385 mPa²h
LApeak (max)	2023-03-16 15:30:57 98.4 dB
LASmax	2023-03-16 15:30:57 84.4 dB
LASmin	2023-03-16 15:42:21 36.9 dB

## Statistics

LCeq	69.3 dB	<b>LA2.00</b> 68.2 dB
LAeq	60.8 dB	<b>LA8.00</b> 58.2 dB
LCeq - LAeq	8.5 dB	<b>LA25.00</b> 47.3 dB
LAlaq	67.3 dB	<b>LA50.00</b> 42.5 dB
LAeq	60.8 dB	<b>LA66.60</b> 39.9 dB
LAlaq - LAeq	6.5 dB	<b>LA90.00</b> 38.1 dB
Overload Count	0	

# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.211.s	Computer's File Name	LxT_0003099-20230316 152934-LxT_Data.211.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM4 33°49'30.83"N 117°12'26.16"W
Job Description	15 minute noise measurement ( 1 x 15 minutes )		
Note	Ganddini 19484 Placentia Ave Industrial Project, City of Perris.		
Start Time	2023-03-16 15:29:34	Duration	0:15:00.0
End Time	2023-03-16 15:44:34	Run Time	0:15:00.0
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	60.8 dB		
LAE	90.3 dB	SEA	--- dB
EA	120.3 μPa <sup>2</sup> h	LAFTM5	69.3 dB
EA8	3.8 mPa <sup>2</sup> h		
EA40	19.2 mPa <sup>2</sup> h		
LA <sub>peak</sub>	98.4 dB	2023-03-16 15:30:57	
LAS <sub>max</sub>	84.4 dB	2023-03-16 15:30:57	
LAS <sub>min</sub>	36.9 dB	2023-03-16 15:42:21	
LA <sub>eq</sub>	60.8 dB		
LC <sub>eq</sub>	69.3 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	8.5 dB
LAI <sub>eq</sub>	67.3 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	6.5 dB

### Exceedances

	Count	Duration
LAS > 65.0 dB	6	0:00:32.3
LAS > 85.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 135.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 137.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 140.0 dB	0	0:00:00.0

### Community Noise

<b>LDN</b>	<b>LDay</b>	<b>LNight</b>	
--- dB	--- dB	0.0 dB	
<b>LDEN</b>	<b>LDay</b>	<b>LEve</b>	<b>LNight</b>
--- dB	--- dB	--- dB	--- dB

### Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L <sub>eq</sub>	60.8 dB		69.3 dB		--- dB	
LS <sub>(max)</sub>	84.4 dB	2023-03-16 15:30:57	--- dB		--- dB	
LS <sub>(min)</sub>	36.9 dB	2023-03-16 15:42:21	--- dB		--- dB	
L <sub>Peak(max)</sub>	98.4 dB	2023-03-16 15:30:57	--- dB		--- dB	

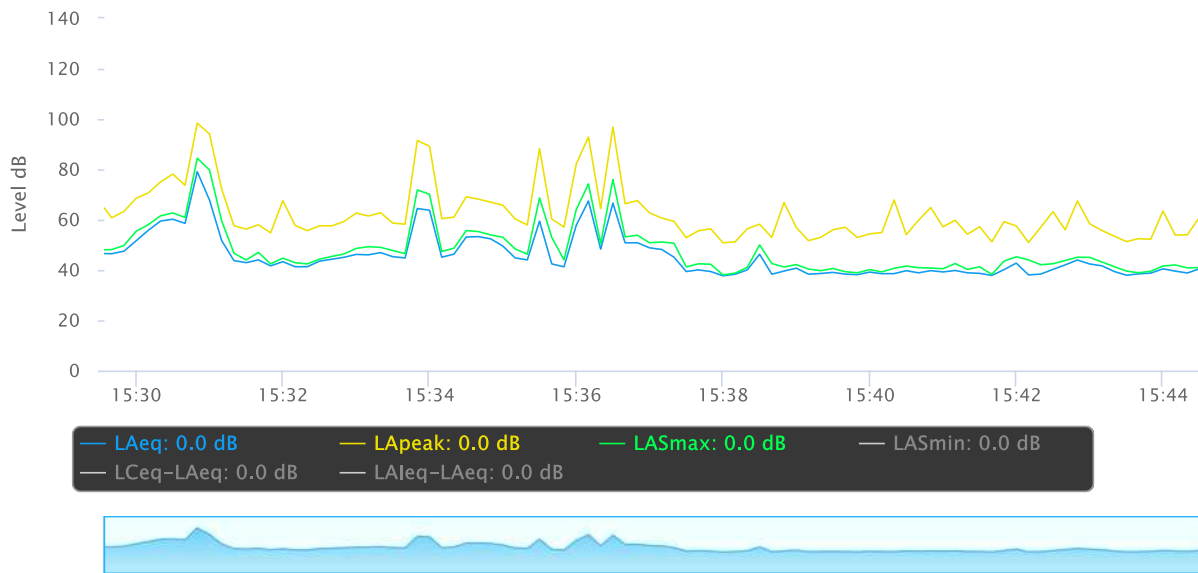
### Overloads

<b>Count</b>	<b>Duration</b>	<b>OBA Count</b>	<b>OBA Duration</b>
0	0:00:00.0	0	0:00:00.0

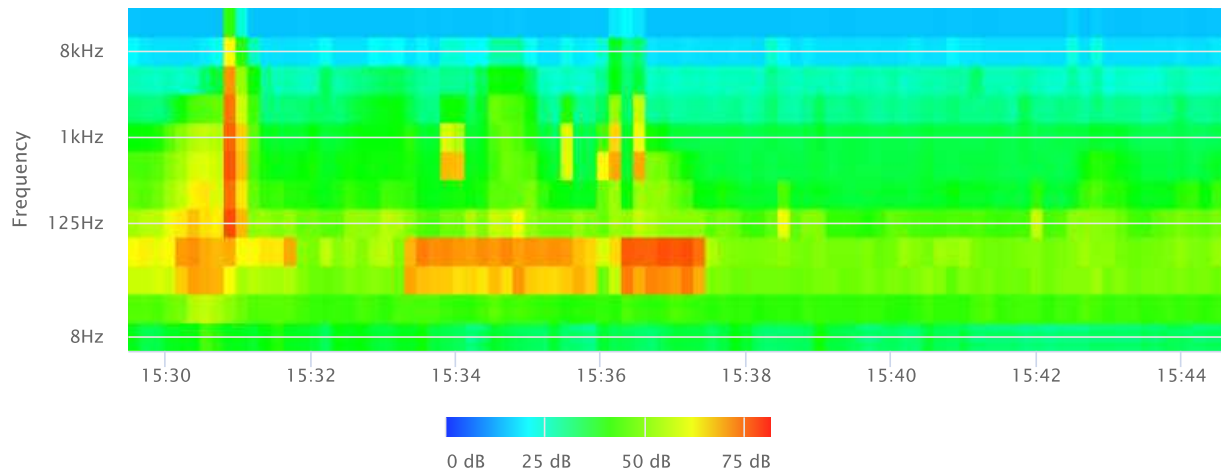
### Statistics

LAS 2.0	68.2 dB
LAS 8.0	58.2 dB
LAS 25.0	47.3 dB
LAS 50.0	42.5 dB
LAS 66.6	39.9 dB
LAS 90.0	38.1 dB

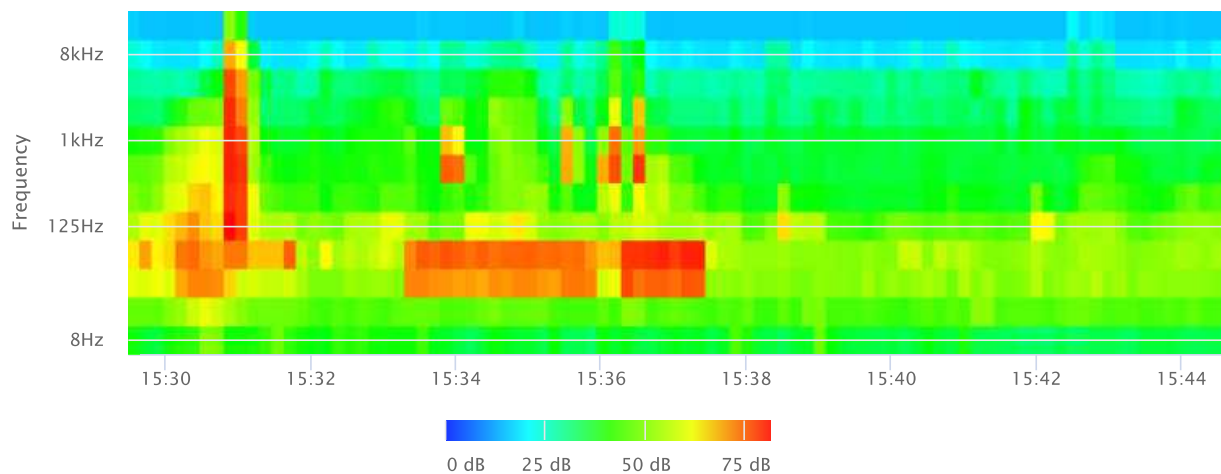
## Time History



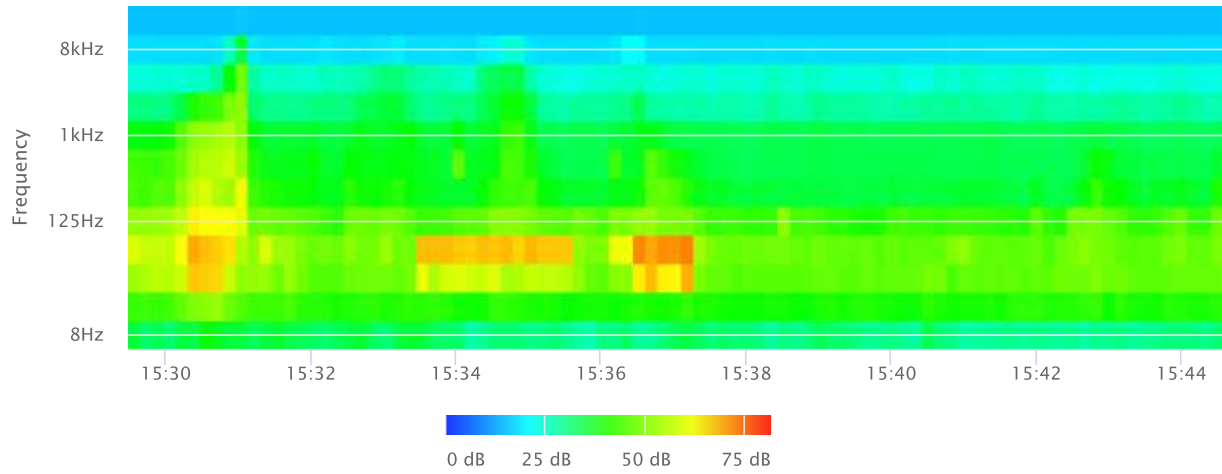
## OBA 1/1 Leq



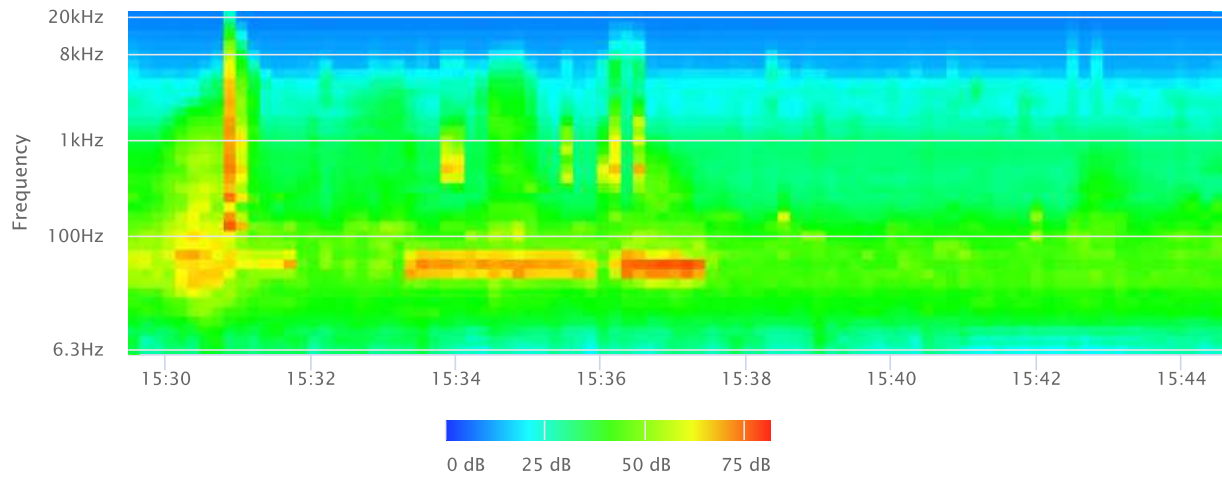
## OBA 1/1 Lmax



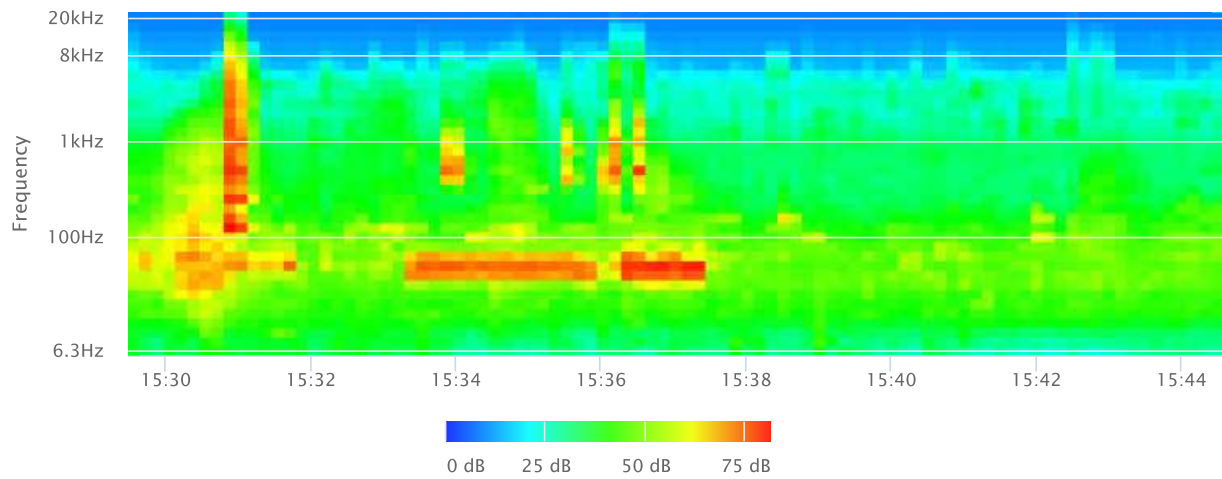
### OBA 1/1 Lmin



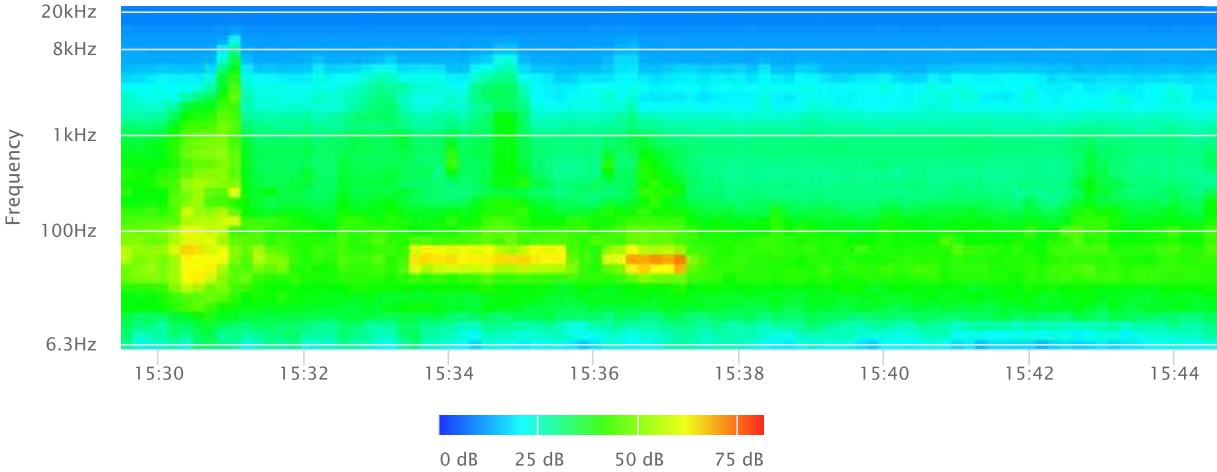
### OBA 1/3 Leq



### OBA 1/3 Lmax



OBA 1/3 Lmin



**Noise Measurement  
Field Data**

**Project Name:** Placentia Avenue Industrial Project, City of Perris **Date:** March 16, 2023  
**Project #:** 19484  
**Noise Measurement #:** STNM5 Run Time: 15 minutes ( 1 x 15 minutes ) **Technician:** Ian Edward Gallagher  
**Nearest Address or Cross Street:** 3060 Wilson Ave, Perris, CA 92571

**Site Description (Type of Existing Land Use and any other notable features):** Measurement Site: Just southeast of parking lot to recently demolished building at 3060 Wilson Ave. Adjacent: Wilson Ave (running N-S) adjacent to east with industrial/commercial uses further east (one under construction), E Rider St (running E-W) ~960' north, demolished commercial use to north/northwest, and vacant land to south of STNM5.

**Weather:** Overcast, grey clouds. Sunset: 6:58 PM **Settings:** SLOW FAST

**Temperature:** 56 deg F **Wind:** 2 mph **Humidity:** 67% **Terrain:** Flat

**Start Time:** 4:08 PM **End Time:** 4:23 PM **Run Time:** \_\_\_\_\_

**Leq:** 60.6 dB **Primary Noise Source:** Traffic noise from the 51 vehicles traveling on Wilson Ave. Traffic ambiance from E Rider Street & other surrounding roads.

**Lmax** 74.6 dB

**L2** 69.5 dB **Secondary Noise Sources:** Overhead air traffic, March ARB ~3 miles NW of STNM5. Bird song.

**L8** 66.4 dB Some pedestrians.

**L25** 60.1 dB

**L50** 50.9 dB

**NOISE METER:** SoundTrack LXT Class 1 **CALIBRATOR:** Larson Davis CA 250

**MAKE:** Larson Davis **MAKE:** Larson Davis

**MODEL:** LXT1 **MODEL:** CA 250

**SERIAL NUMBER:** 3099 **SERIAL NUMBER:** 2723

**FACTORY CALIBRATION DATE:** 11/17/2021 **FACTORY CALIBRATION DATE:** 11/18/2021

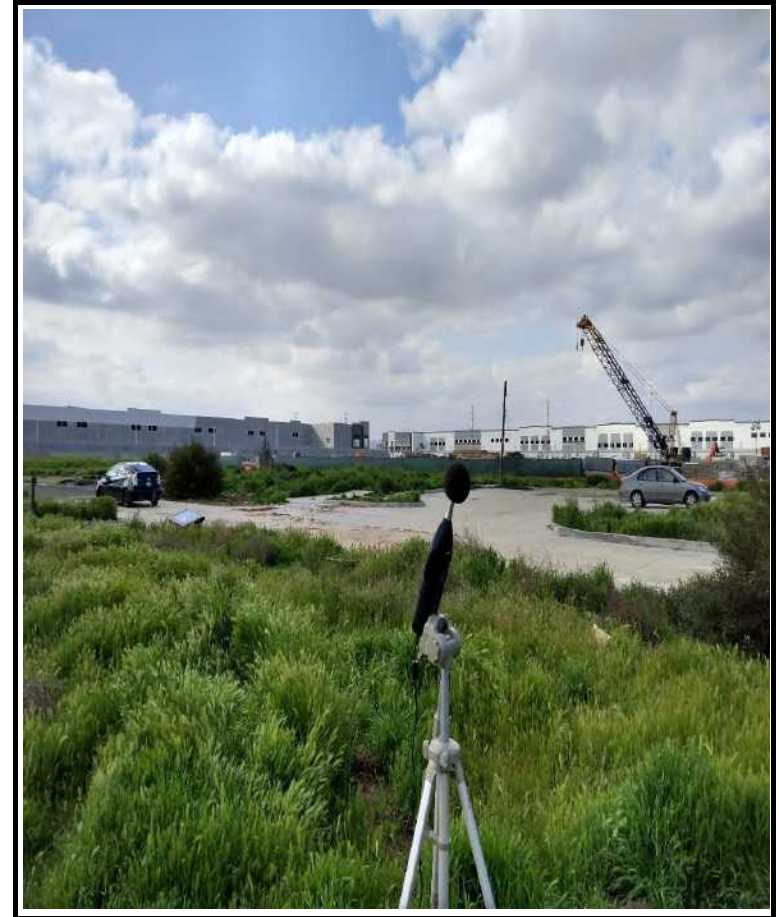
**FIELD CALIBRATION DATE:** 3/16/2023

Noise Measurement  
Field Data

PHOTOS:



STNM5 looking E across Wilson Avenue. Building at 3125 Wilson Avenue on right of image & warehouse under construction on left of image.



STNM5 looking NW towards parking lot of what was once building 3060 Wilson Ave, Perris ( demolished ).

## Summary

File Name on Meter	LxT_Data.212.s
File Name on PC	LxT_0003099-20230316 160842-LxT_Data.212.lbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM5 33°49'38.81"N 117°12'47.25"W
Job Description	15 minute noise measurement ( 1 x 15 minutes )
Note	Ganddini 19484 Placentia Ave Industrial Project, City of Perris.

## Measurement

Start	2023-03-16 16:08:42
Stop	2023-03-16 16:23:42
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2023-03-16 16:08:19
Post-Calibration	None

## Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	C Weighting
OBA Max Spectrum	At LMax
Overload	122.6 dB

## Results

LAeq	60.6
LAE	90.1
EA	114.9531 µPa²h
EA8	3.678499 mPa²h
EA40	18.39249 mPa²h
LApeak (max)	2023-03-16 16:13:33 93.0 dB
LASmax	2023-03-16 16:16:24 74.6 dB
LASmin	2023-03-16 16:21:42 38.3 dB

## Statistics

LCeq	68.4 dB	<b>LA2.00</b>	69.5 dB
LAeq	60.6 dB	<b>LA8.00</b>	66.4 dB
LCeq - LAeq	7.8 dB	<b>LA25.00</b>	60.1 dB
LAleq	62.6 dB	<b>LA50.00</b>	50.9 dB
LAeq	60.6 dB	<b>LA66.60</b>	46.5 dB
LAleq - LAeq	2.0 dB	<b>LA90.00</b>	41.2 dB
Overload Count	0		

# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.212.s	Computer's File Name	LxT_0003099-20230316 160842-LxT_Data.212.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM5 33°49'38.81"N 117°12'47.25"W
Job Description	15 minute noise measurement ( 1 x 15 minutes )		
Note	Ganddini 19484 Placentia Ave Industrial Project, City of Perris.		
Start Time	2023-03-16 16:08:42	Duration	0:15:00.0
End Time	2023-03-16 16:23:42	Run Time	0:15:00.0
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	60.6 dB		
LAE	90.1 dB	SEA	--- dB
EA	115.0 µPa²h	LAFTM5	65.5 dB
EA8	3.7 mPa²h		
EA40	18.4 mPa²h		
LA <sub>peak</sub>	93.0 dB	2023-03-16 16:13:33	
LAS <sub>max</sub>	74.6 dB	2023-03-16 16:16:24	
LAS <sub>min</sub>	38.3 dB	2023-03-16 16:21:42	
LA <sub>eq</sub>	60.6 dB		
LC <sub>eq</sub>	68.4 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	7.8 dB
LAI <sub>eq</sub>	62.6 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	2.0 dB

### Exceedances

	Count	Duration
LAS > 65.0 dB	31	0:02:14.6
LAS > 85.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 135.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 137.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 140.0 dB	0	0:00:00.0

### Community Noise

<b>LDN</b>	<b>LDay</b>	<b>LNight</b>	
--- dB	--- dB	0.0 dB	
<b>LDEN</b>	<b>LDay</b>	<b>LEve</b>	<b>LNight</b>
--- dB	--- dB	--- dB	--- dB

### Any Data

	Level	A Time Stamp	Level	C Time Stamp	Level	Z Time Stamp
L <sub>eq</sub>	60.6 dB		68.4 dB		--- dB	
LS <sub>(max)</sub>	74.6 dB	2023-03-16 16:16:24	--- dB		--- dB	
LS <sub>(min)</sub>	38.3 dB	2023-03-16 16:21:42	--- dB		--- dB	
L <sub>Peak(max)</sub>	93.0 dB	2023-03-16 16:13:33	--- dB		--- dB	

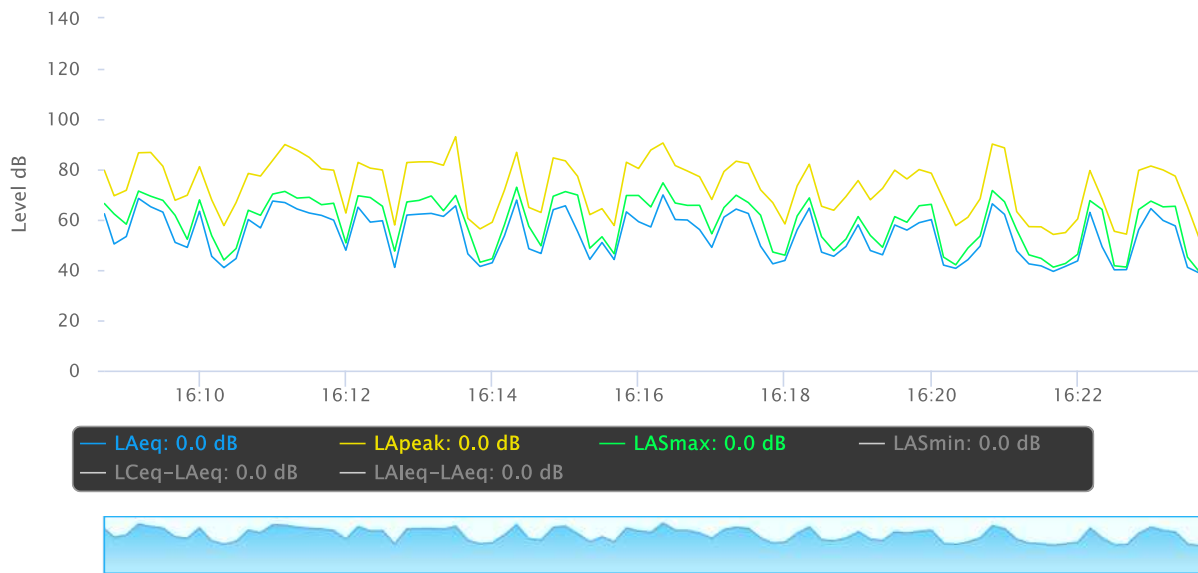
### Overloads

<b>Count</b>	<b>Duration</b>	<b>OBA Count</b>	<b>OBA Duration</b>
0	0:00:00.0	0	0:00:00.0

### Statistics

LAS 2.0	69.5 dB
LAS 8.0	66.4 dB
LAS 25.0	60.1 dB
LAS 50.0	50.9 dB
LAS 66.6	46.5 dB
LAS 90.0	41.2 dB

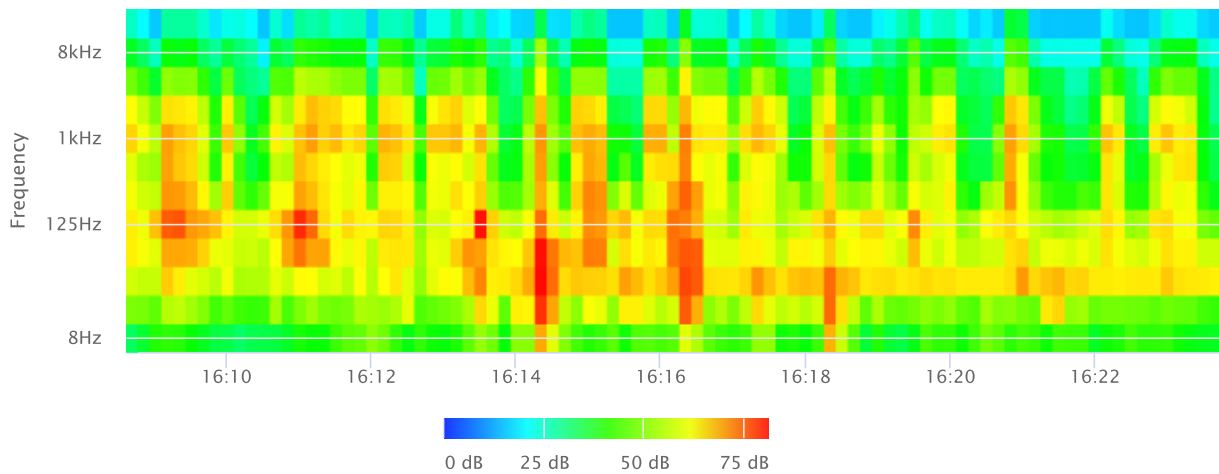
### Time History



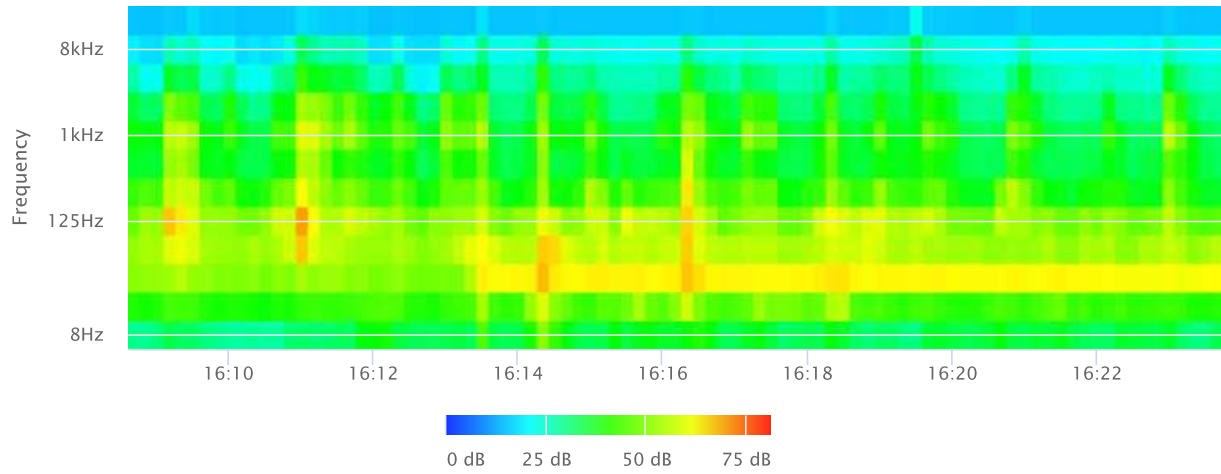
### OBA 1/1 Leq



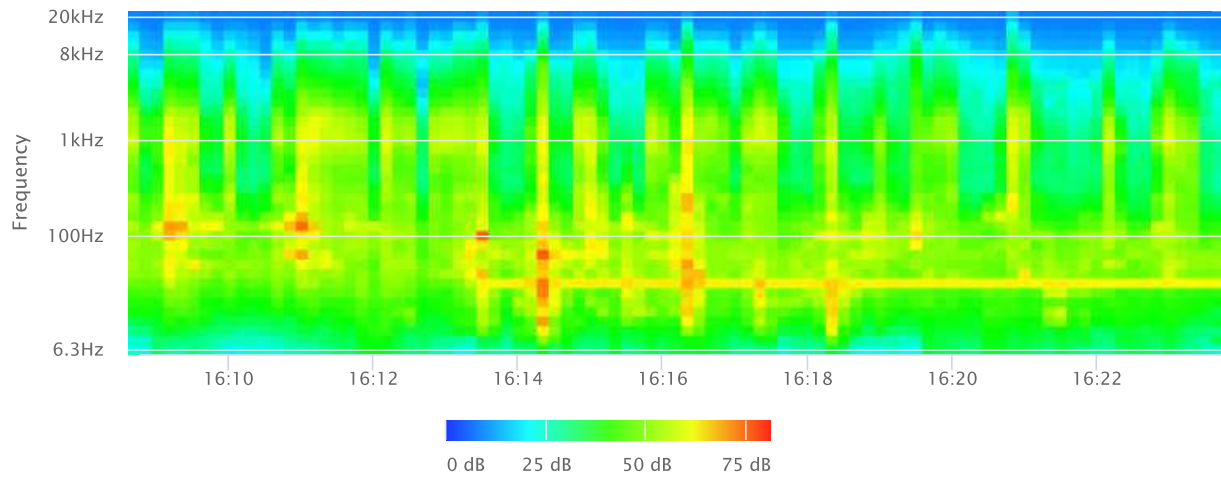
### OBA 1/1 Lmax



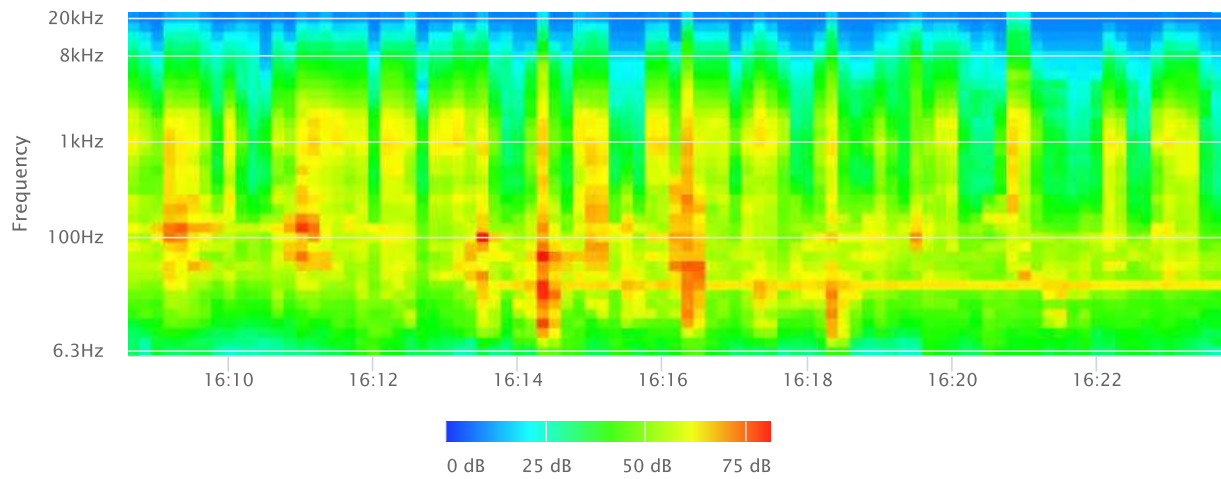
### OBA 1/1 Lmin



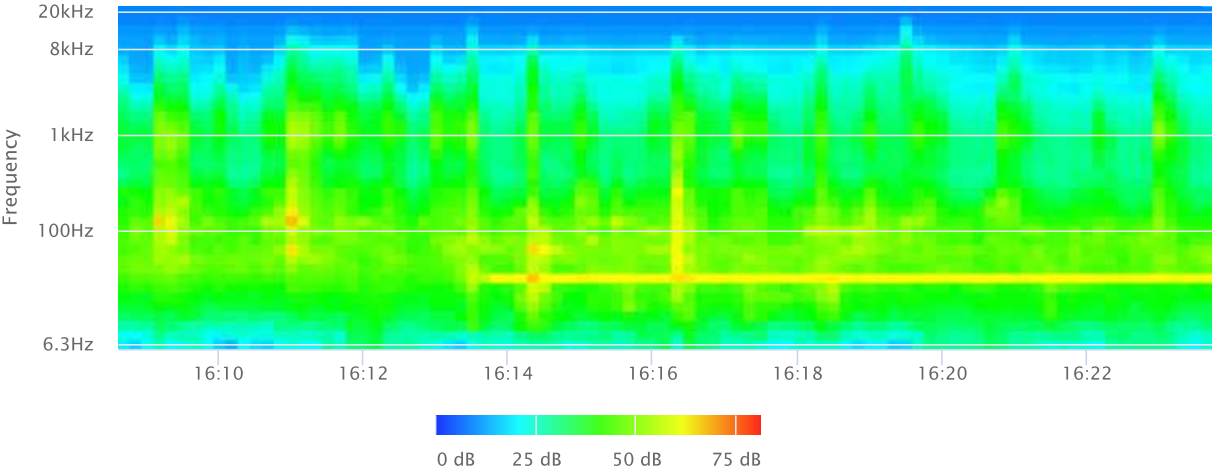
### OBA 1/3 Leq



### OBA 1/3 Lmax



OBA 1/3 Lmin



**Noise Measurement  
Field Data**

**Project Name:** Placentia Avenue Industrial Project, City of Perris **Date:** March 16-17, 2023

**Project #:** 19484

**Noise Measurement #:** LTNM1 Run Time: 24 hours ( 24 x 1 hours ) **Technician:** Ian Edward Gallagher

**Nearest Address or Cross Street:** 3125 Wilson Ave, Perris, CA 92571

**Site Description (Type of Existing Land Use and any other notable features):** Measurement Site: Taken in the NW quadrant of project site.

Adjacent: Wilson Ave (running N-S) ~400' W, Placentia Ave (running E-W) ~780' S, industrial use with trailer parking to north, & vacant project site surrounding to S/E/W.

**Weather:** Overcast, grey clouds. Sunset: 6:58 PM **Settings:** SLOW FAST

**Temperature:** 44-58 deg F **Wind:** 2-7 mph **Humidity:** 67-100% **Terrain:** Flat

**Start Time:** 6:00 PM **End Time:** 6:00 PM **Run Time:** \_\_\_\_\_

**Leq:** 51.2 dB **Primary Noise Source:** Overhead air traffic from March ARB ~3 miles NW of LTNM1.

**Lmax** 85 dB Warehouse ambiance, engine noise from warehouse parking lot, 3125 Wilson Ave.

**L2** 57.7 dB **Secondary Noise Sources:** Bird song by day. Traffic ambiance from Wilson Ave ~400' W of microphone &

**L8** 48.4 dB Placentia Ave ~780' S of microphone. Vegetation rustle from light breeze.

**L25** 44.5 dB

**L50** 41.1 dB

**NOISE METER:** SoundTrack LXT Class 1 **CALIBRATOR:** Larson Davis CA 250

**MAKE:** Larson Davis **MAKE:** Larson Davis

**MODEL:** LXT1 **MODEL:** CA 250

**SERIAL NUMBER:** 3099 **SERIAL NUMBER:** 2723

**FACTORY CALIBRATION DATE:** 11/17/2021 **FACTORY CALIBRATION DATE:** 11/18/2021

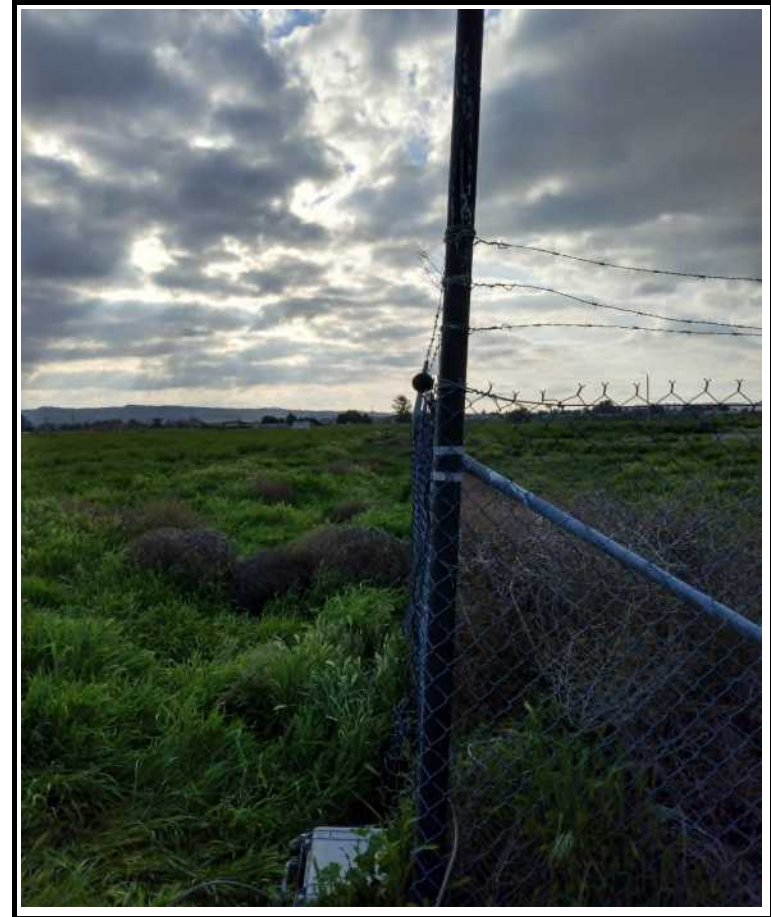
**FIELD CALIBRATION DATE:** 3/16/2023

Noise Measurement  
Field Data

PHOTOS:



LTNM1 looking N towards trailer parking lot & warehouse at 3125 Wilson Avenue, Perris. Parking lot ~200' N of LTNM1.



LTNM1 looking W across open grassy land towards Wilson Avenue (running N-S) (~400' W).

## Summary

File Name on Meter	LxT_Data.213.s
File Name on PC	LxT_0003099-20230316 180000-LxT_Data.213.ldbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	LTNM1 33°49'30.58"N 117°12'41.77"W
Job Description	24 hour noise measurement ( 24 x 1 hours )
Note	Ganddini 19484 Placentia Ave Industrial Project, City of Perris.

## Measurement

Start	2023-03-16 18:00:00
Stop	2023-03-17 18:00:00
Duration	24:00:00.0
Run Time	24:00:00.0
Pause	00:00:00.0
Pre-Calibration	2023-03-16 17:10:11
Post-Calibration	None

## Overall Settings

RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	122.7 dB

## Results

LAeq	51.2
LAE	100.5
EA	1.253514 mPa <sup>2</sup> h
EA8	417.8381 μPa <sup>2</sup> h
EA40	2.08919 mPa <sup>2</sup> h
LApeak (max)	2023-03-17 14:14:49 99.9 dB
LASmax	2023-03-17 14:14:49 85.0 dB
LASmin	2023-03-17 06:39:19 30.9 dB

## Statistics

LCeq	59.0 dB	<b>LA2.00</b>	57.7 dB
LAeq	51.2 dB	<b>LA8.00</b>	48.4 dB
LCeq - LAeq	7.9 dB	<b>LA25.00</b>	44.5 dB
LAlaq	57.6 dB	<b>LA50.00</b>	41.1 dB
LAeq	51.2 dB	<b>LA90.00</b>	36.2 dB
LAlaq - LAeq	6.5 dB	<b>LA99.00</b>	33.7 dB
Overload Count	0		

Record #	Date	Time	Run Duration	Run Time	Pause	LAeq	LASmin	LASmin Time	LASmax	LASmax Time	LAS2.00	LAS8.00	LAS25.00	LAS50.00	LAS90.00	LAS99.00
1	2023-03-16	18:00:00	01:00:00.0	01:00:00.0	00:00:00.0	54.5	35.2	18:28:04	81.6	18:12:00	60.3	54.1	46.9	43.3	39.6	36.6
2	2023-03-16	19:00:00	01:00:00.0	01:00:00.0	00:00:00.0	48.4	40.1	19:07:30	68.5	19:05:55	55.0	51.4	47.9	46.0	43.4	41.6
3	2023-03-16	20:00:00	01:00:00.0	01:00:00.0	00:00:00.0	48.5	42.1	20:33:01	65.9	20:29:30	55.6	49.6	47.2	45.8	43.8	42.7
4	2023-03-16	21:00:00	01:00:00.0	01:00:00.0	00:00:00.0	45.1	40.1	21:04:28	61.6	21:00:43	48.8	46.9	45.5	44.6	43.0	41.0
5	2023-03-16	22:00:00	01:00:00.0	01:00:00.0	00:00:00.0	45.5	35.7	22:59:28	57.6	22:55:09	50.2	48.5	46.2	44.5	41.1	37.5
6	2023-03-16	23:00:00	01:00:00.0	01:00:00.0	00:00:00.0	41.5	33.6	23:05:03	56.4	23:54:29	46.6	44.8	42.4	40.0	36.6	34.8
7	2023-03-17	00:00:00	01:00:00.0	01:00:00.0	00:00:00.0	45.2	35.5	00:51:58	72.1	00:57:36	47.3	44.6	43.1	41.1	38.5	36.7
8	2023-03-17	01:00:00	01:00:00.0	01:00:00.0	00:00:00.0	40.2	34.0	01:14:53	59.9	01:32:11	45.0	42.7	40.8	38.3	36.4	35.2
9	2023-03-17	02:00:00	01:00:00.0	01:00:00.0	00:00:00.0	40.4	33.9	02:14:04	60.5	02:58:57	46.9	43.4	40.4	38.4	35.8	34.7
10	2023-03-17	03:00:00	01:00:00.0	01:00:00.0	00:00:00.0	41.4	33.8	03:16:16	58.5	03:06:10	46.6	43.8	42.2	40.1	36.6	35.0
11	2023-03-17	04:00:00	01:00:00.0	01:00:00.0	00:00:00.0	44.7	39.6	04:39:00	57.0	04:40:16	48.2	46.6	45.2	44.2	42.5	41.0
12	2023-03-17	05:00:00	01:00:00.0	01:00:00.0	00:00:00.0	41.8	34.3	05:58:05	62.0	05:36:56	47.3	44.2	41.6	40.0	37.2	35.4
13	2023-03-17	06:00:00	01:00:00.0	01:00:00.0	00:00:00.0	42.1	30.9	06:39:19	64.6	06:43:50	49.7	44.2	40.3	37.5	33.7	31.7
14	2023-03-17	07:00:00	01:00:00.0	01:00:00.0	00:00:00.0	60.7	32.5	07:16:26	78.1	07:29:53	71.6	64.9	56.1	45.5	38.2	33.9
15	2023-03-17	08:00:00	01:00:00.0	01:00:00.0	00:00:00.0	54.8	34.1	08:47:50	82.6	08:23:42	65.0	57.4	44.6	40.9	37.0	35.6
16	2023-03-17	09:00:00	01:00:00.0	01:00:00.0	00:00:00.0	49.9	34.5	09:00:51	69.2	09:57:20	61.2	53.9	45.3	41.0	37.4	35.6
17	2023-03-17	10:00:00	01:00:00.0	01:00:00.0	00:00:00.0	44.7	34.1	10:26:01	63.4	10:16:50	53.7	45.1	41.5	39.3	36.1	35.0
18	2023-03-17	11:00:00	01:00:00.0	01:00:00.0	00:00:00.0	40.9	33.3	11:21:22	55.3	11:19:23	49.2	44.8	40.0	37.4	35.0	34.1
19	2023-03-17	12:00:00	01:00:00.0	01:00:00.0	00:00:00.0	51.5	32.0	12:55:58	76.1	12:48:45	57.8	48.5	41.6	37.2	34.0	32.8
20	2023-03-17	13:00:00	01:00:00.0	01:00:00.0	00:00:00.0	42.5	32.4	13:55:48	58.0	13:41:36	50.5	46.6	42.0	39.1	35.3	33.6
21	2023-03-17	14:00:00	01:00:00.0	01:00:00.0	00:00:00.0	58.0	32.4	14:01:39	85.0	14:14:49	59.6	49.1	42.8	39.7	36.0	34.2
22	2023-03-17	15:00:00	01:00:00.0	01:00:00.0	00:00:00.0	42.9	31.8	15:22:48	66.5	15:08:12	51.2	46.0	41.8	38.7	34.8	32.8
23	2023-03-17	16:00:00	01:00:00.0	01:00:00.0	00:00:00.0	46.6	34.1	16:59:19	67.9	16:54:10	54.8	47.9	43.7	41.4	37.8	35.9
24	2023-03-17	17:00:00	01:00:00.0	01:00:00.0	00:00:00.0	43.9	33.6	17:31:18	60.6	17:44:55	53.4	47.1	41.8	39.3	36.2	34.7

# Measurement Report

## Report Summary

Meter's File Name	LxT_Data.213.s	Computer's File Name	LxT_0003099-20230316 180000-LxT_Data.213.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	LTNM1 33°49'30.58"N 117°12'41.77"W
Job Description	24 hour noise measurement ( 24 x 1 hours )		
Note	Ganddini 19484 Placentia Ave Industrial Project, City of Perris.		
Start Time	2023-03-16 18:00:00	Duration	24:00:00.0
End Time	2023-03-17 18:00:00	Run Time	24:00:00.0
		Pause Time	0:00:00.0

## Results

### Overall Metrics

LA <sub>eq</sub>	51.2 dB		
LAE	100.5 dB	SEA	--- dB
EA	1.3 mPa <sup>2</sup> h	LAFTM5	59.5 dB
EA8	417.8 μPa <sup>2</sup> h		
EA40	2.1 mPa <sup>2</sup> h		
LA <sub>peak</sub>	99.9 dB	2023-03-17 14:14:49	
LAS <sub>max</sub>	85.0 dB	2023-03-17 14:14:49	
LAS <sub>min</sub>	30.9 dB	2023-03-17 06:39:19	
LA <sub>eq</sub>	51.2 dB		
LC <sub>eq</sub>	59.0 dB	LC <sub>eq</sub> - LA <sub>eq</sub>	7.9 dB
LAI <sub>eq</sub>	57.6 dB	LAI <sub>eq</sub> - LA <sub>eq</sub>	6.5 dB

### Exceedances

	Count	Duration
LAS > 65.0 dB	209	0:10:28.4
LAS > 85.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 135.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 137.0 dB	0	0:00:00.0
LA <sub>peak</sub> > 140.0 dB	0	0:00:00.0

### Community Noise

LDN	LDay	LNight	
--- dB	--- dB	0.0 dB	
LDEN	LDay	LEve	LNight
--- dB	--- dB	--- dB	--- dB

### Any Data

	Level	A Time Stamp	Level	C Time Stamp	Level	Z Time Stamp
L <sub>eq</sub>	51.2 dB		59.0 dB		--- dB	
LS <sub>(max)</sub>	85.0 dB	2023-03-17 14:14:49	--- dB		--- dB	
LS <sub>(min)</sub>	30.9 dB	2023-03-17 06:39:19	--- dB		--- dB	
L <sub>Peak(max)</sub>	99.9 dB	2023-03-17 14:14:49	--- dB		--- dB	

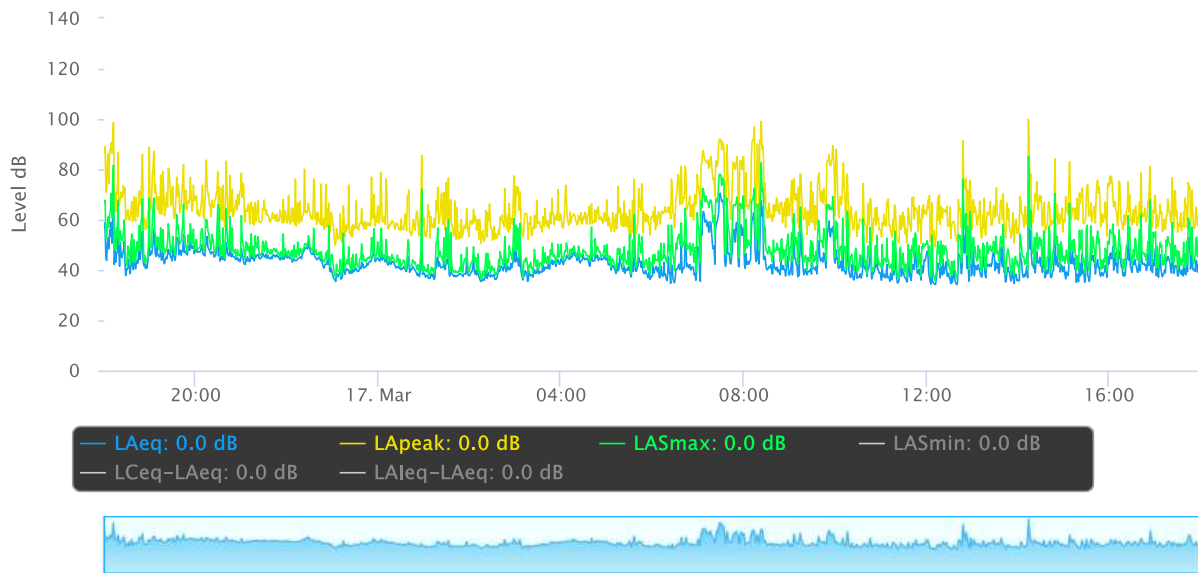
### Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

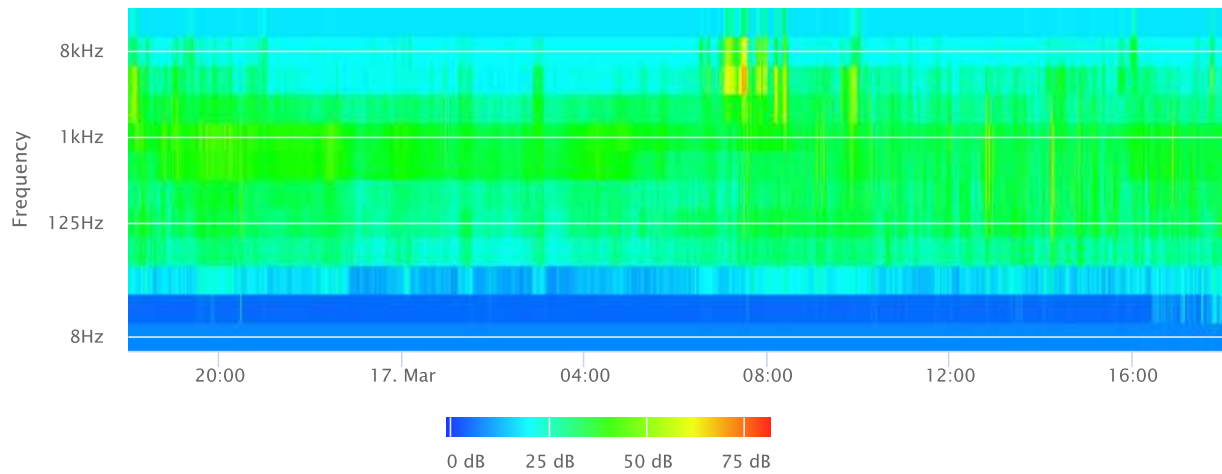
### Statistics

LAS 2.0	57.7 dB
LAS 8.0	48.4 dB
LAS 25.0	44.5 dB
LAS 50.0	41.1 dB
LAS 90.0	36.2 dB
LAS 99.0	33.7 dB

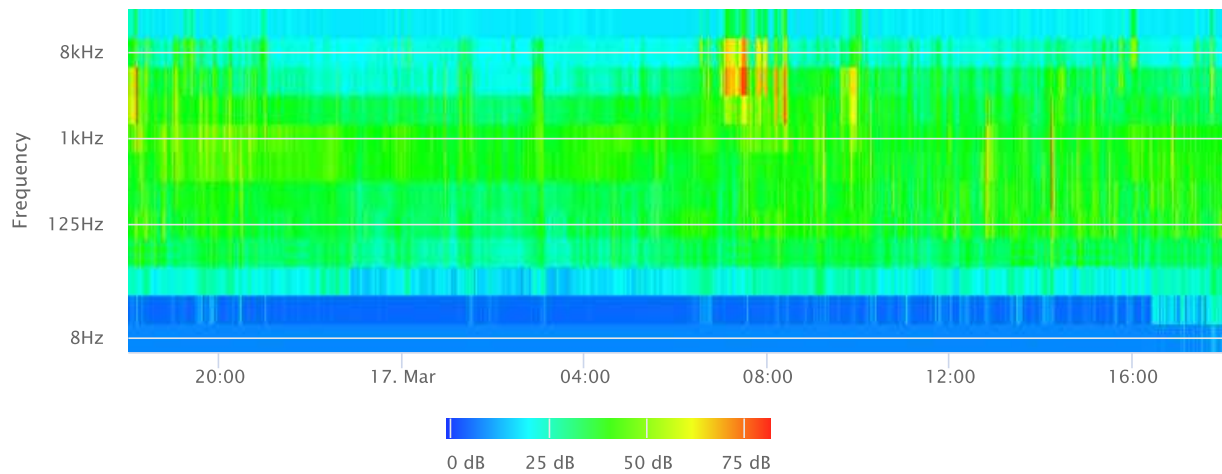
### Time History



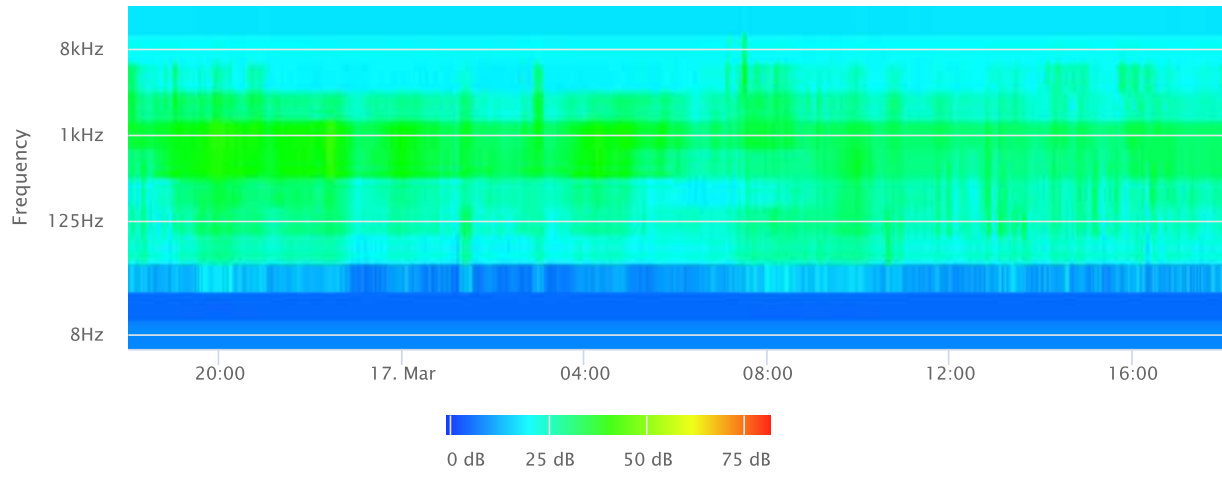
### OBA 1/1 Leq



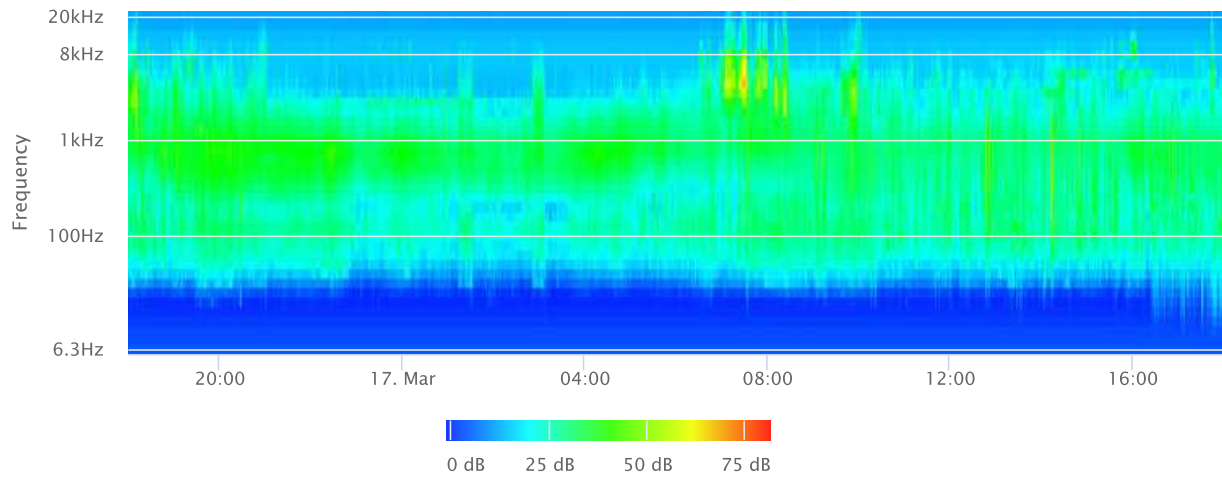
### OBA 1/1 Lmax



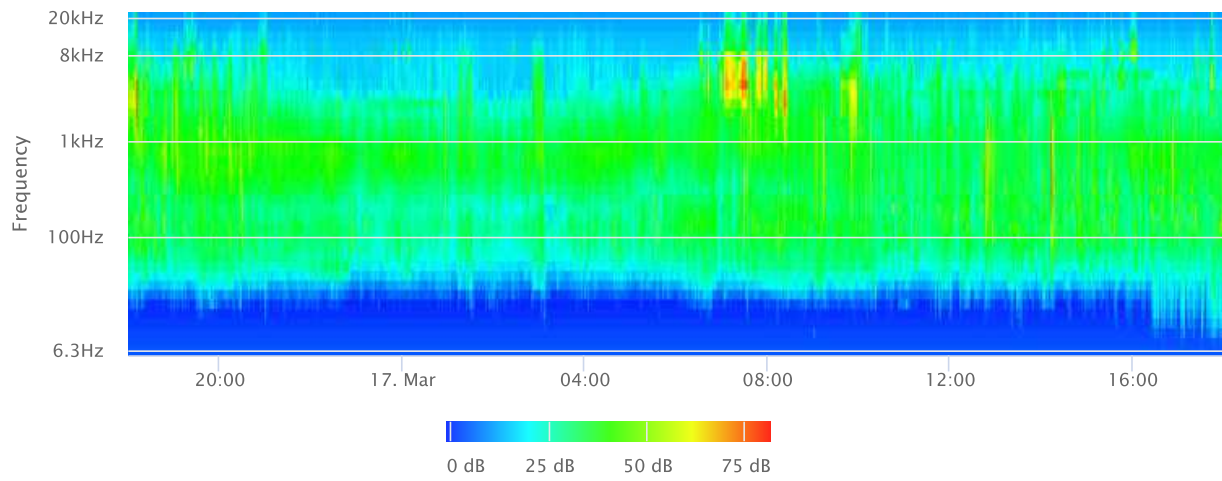
### OBA 1/1 Lmin



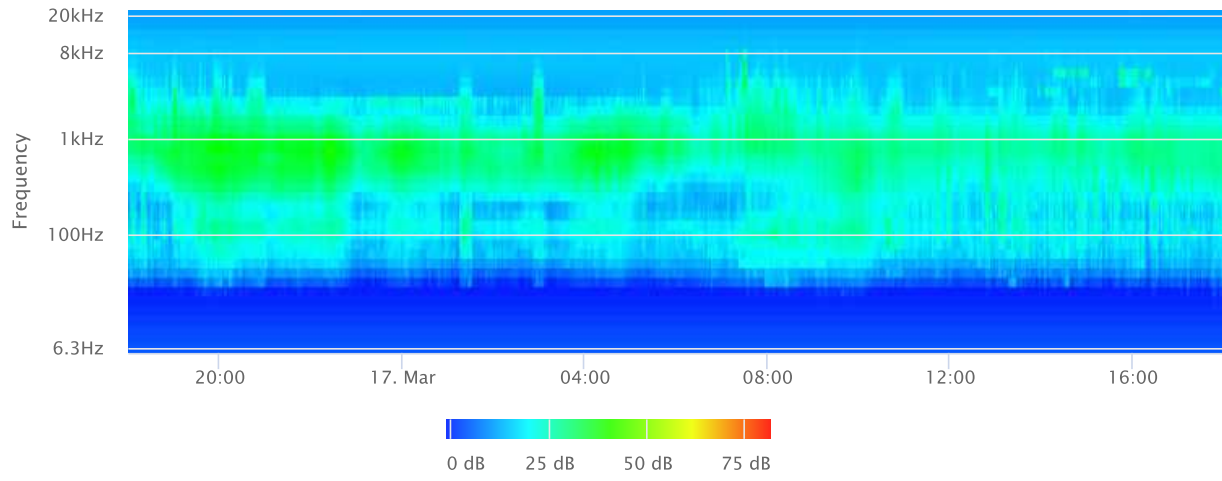
### OBA 1/3 Leq



### OBA 1/3 Lmax



# OBA 1/3 Lmin



**APPENDIX D**  
**CONSTRUCTION NOISE MODEL WORKSHEETS**

Receptor -Residential to the South (691 Placentia Avenue, Perris)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA <sup>1</sup>	Distance to Receptor <sup>3</sup>	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
<b>Grading</b>									
Rubber Tired Dozers	1	82	540	40	0.40	-20.7	-4.0	61.3	57.4
Tractors/Loaders/Backhoes	2	84	540	40	0.80	-20.7	-1.0	63.3	62.4
Excavators	2	81	540	40	0.80	-20.7	-1.0	60.3	59.4
Scrapers	2	84	540	40	0.80	-20.7	-1.0	63.3	62.4
Graders	1	85	540	40	0.40	-20.7	-4.0	64.3	60.4
								Log Sum	67.7
<b>Building Construction</b>									
Cranes	2	81	540	16	0.32	-20.7	-4.9	60.3	55.4
Forklifts <sup>2</sup>	4	48	540	40	1.60	-20.7	2.0	27.3	29.4
Generator Sets	1	81	540	50	0.50	-20.7	-3.0	60.3	57.3
Welders	2	74	540	40	0.80	-20.7	-1.0	53.3	52.4
Tractors/Loaders/Backhoes	4	84	540	40	1.60	-20.7	2.0	63.3	65.4
								Log Sum	66.5
<b>Paving</b>									
Pavers	2	77	540	50	1.00	-20.7	0.0	56.3	56.3
Paving Equipment	2	77	540	50	1.00	-20.7	0.0	56.3	56.3
Rollers	2	80	540	20	0.40	-20.7	-4.0	59.3	55.4
								Log Sum	60.8
<b>Architectural Coating</b>									
Air Compressors	1	78	540	40	0.40	-20.7	-4.0	57.3	53.4
								Log Sum	53.4

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Residential to the East/Northeast (2988 Clapper Street, Perris)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA <sup>1</sup>	Distance to Receptor <sup>3</sup>	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
<b>Grading</b>									
Rubber Tired Dozers	1	82	1150	40	0.40	-27.2	-4.0	54.8	50.8
Tractors/Loaders/Backhoes	2	84	1150	40	0.80	-27.2	-1.0	56.8	55.8
Excavators	2	81	1150	40	0.80	-27.2	-1.0	53.8	52.8
Scrapers	2	84	1150	40	0.80	-27.2	-1.0	56.8	55.8
Graders	1	85	1150	40	0.40	-27.2	-4.0	57.8	53.8
								Log Sum	61.2
<b>Building Construction</b>									
Cranes	2	81	1150	16	0.32	-27.2	-4.9	53.8	48.8
Forklifts <sup>2</sup>	4	48	1150	40	1.60	-27.2	2.0	20.8	22.8
Generator Sets	1	81	1150	50	0.50	-27.2	-3.0	53.8	50.8
Welders	2	74	1150	40	0.80	-27.2	-1.0	46.8	45.8
Tractors/Loaders/Backhoes	4	84	1150	40	1.60	-27.2	2.0	56.8	58.8
								Log Sum	60.0
<b>Paving</b>									
Pavers	2	77	1150	50	1.00	-27.2	0.0	49.8	49.8
Paving Equipment	2	77	1150	50	1.00	-27.2	0.0	49.8	49.8
Rollers	2	80	1150	20	0.40	-27.2	-4.0	52.8	48.8
								Log Sum	54.2
<b>Architectural Coating</b>									
Air Compressors	1	78	1150	40	0.40	-27.2	-4.0	50.8	46.8
								Log Sum	46.8

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Residential to the West (2865 Redlands Avenue, Perris)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA <sup>1</sup>	Distance to Receptor <sup>3</sup>	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
<b>Grading</b>									
Rubber Tired Dozers	1	82	1310	40	0.40	-28.4	-4.0	53.6	49.7
Tractors/Loaders/Backhoes	2	84	1310	40	0.80	-28.4	-1.0	55.6	54.7
Excavators	2	81	1310	40	0.80	-28.4	-1.0	52.6	51.7
Scrapers	2	84	1310	40	0.80	-28.4	-1.0	55.6	54.7
Graders	1	85	1310	40	0.40	-28.4	-4.0	56.6	52.7
								Log Sum	60.0
<b>Building Construction</b>									
Cranes	2	81	1310	16	0.32	-28.4	-4.9	52.6	47.7
Forklifts <sup>2</sup>	4	48	1310	40	1.60	-28.4	2.0	19.6	21.7
Generator Sets	1	81	1310	50	0.50	-28.4	-3.0	52.6	49.6
Welders	2	74	1310	40	0.80	-28.4	-1.0	45.6	44.7
Tractors/Loaders/Backhoes	4	84	1310	40	1.60	-28.4	2.0	55.6	57.7
								Log Sum	58.8
<b>Paving</b>									
Pavers	2	77	1310	50	1.00	-28.4	0.0	48.6	48.6
Paving Equipment	2	77	1310	50	1.00	-28.4	0.0	48.6	48.6
Rollers	2	80	1310	20	0.40	-28.4	-4.0	51.6	47.7
								Log Sum	53.1
<b>Architectural Coating</b>									
Air Compressors	1	78	1310	40	0.40	-28.4	-4.0	49.6	45.7
								Log Sum	45.7

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construction Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

**APPENDIX E**  
**SOUNDPLAN WORKSHEETS**

## Noise emissions of industry sources

Source name	Reference	Level	Frequency spectrum [dB(A)]										Corrections			
			dB(A)	31 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz	Cwall dB	CI dB	CT dB
N Loading Area	Lw/m <sup>2</sup>	Day	67.0	-	34.0	44.0	51.1	57.1	60.0	61.0	61.1	59.0	-	-	-	-
S Loading Area	Lw/m <sup>2</sup>	Day	67.0	-	34.0	44.0	51.1	57.1	60.0	61.0	61.1	59.0	-	-	-	-
HVAC1	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC2	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC 3	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC 4	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC 5	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC6	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC7	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC8	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC9	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC10	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC11	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC12	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC13	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC14	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC15	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC16	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC17	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
HVAC18	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-

## Noise emissions of road traffic

Station km	ADT Veh/24h	Vehicles type	Traffic values				Speed km/h	Contr device	Cons Speed km/h	Affec veh. %	Road surface	Gradien Min / Max %
			Vehicle name	day Veh/h	evening Veh/h	night Veh/h						
Drive 1												
Traffic direction: In entry direction												
0+000	97	Total	-	6	6	1	-	none	-	-	Average (of DGAC a	0.0
		Automobiles	-	-	-	-	-					
		Medium trucks	-	2	2	0	24					
		Heavy trucks	-	4	4	1	24					
		Buses	-	-	-	-	-					
		Motorcycles	-	-	-	-	-					
		Auxiliary vehicle	-	-	-	-	-					
Drive 2												
Traffic direction: In entry direction												
0+000	97	Total	-	6	6	1	-	none	-	-	Average (of DGAC a	0.0
		Automobiles	-	-	-	-	-					
		Medium trucks	-	2	2	0	24					
		Heavy trucks	-	4	4	1	24					
		Buses	-	-	-	-	-					
		Motorcycles	-	-	-	-	-					
		Auxiliary vehicle	-	-	-	-	-					

## Noise emissions of parking lot traffic

Name	Parking lot type	Size	Movements per hour			Road surface	Separated method	Lw,ref dB(A)
			Day	Evening	Night			
P1	Rest stop (Trucks)	72 Parking bays	0.043	0.043	0.033	Asphaltic driving lanes	no	100.1
P2	Rest stop (Trucks)	66 Parking bays	0.043	0.043	0.033	Asphaltic driving lanes	no	99.6
P3	Visitors and staff	201 Parking bays	0.173	0.173	0.200	Asphaltic driving lanes	no	91.7

## Receiver list

No.	Receiver name	Building side	Floor	Limit Lden dB(A)	Level Lden dB(A)	Conflict Lden dB
1	1	-	EG	-	40.5	-
2	2	-	EG	-	52.4	-
3	3	-	EG	-	50.5	-
4	4	-	EG	-	51.4	-
5	5	-	EG	-	53.1	-

## Contribution levels of the receivers

Source name	Traffic lane	Level Lden dB(A)
1	EG	40.5
Drive 1	-	32.4
Drive 2	-	32.2
HVAC1	-	16.2
HVAC2	-	16.4
HVAC6	-	13.6
HVAC7	-	13.6
HVAC8	-	13.4
HVAC9	-	11.5
HVAC10	-	11.5
HVAC11	-	11.4
HVAC12	-	9.9
HVAC13	-	9.9
HVAC14	-	9.8
HVAC15	-	8.4
HVAC16	-	8.4
HVAC17	-	8.4
HVAC18	-	8.2
HVAC 3	-	16.4
HVAC 4	-	16.1
HVAC 5	-	15.8
N Loading Area	-	27.1
P1	-	28.1
P2	-	25.0
P3	-	37.5
S Loading Area	-	24.9
2	EG	52.4
Drive 1	-	31.4
Drive 2	-	44.1
HVAC1	-	16.4
HVAC2	-	18.2
HVAC6	-	14.3
HVAC7	-	14.8
HVAC8	-	16.7
HVAC9	-	11.7
HVAC10	-	13.4
HVAC11	-	16.7
HVAC12	-	11.2
HVAC13	-	13.4
HVAC14	-	14.4
HVAC15	-	11.1
HVAC16	-	11.8
HVAC17	-	12.4
HVAC18	-	12.9
HVAC 3	-	20.0
HVAC 4	-	21.8
HVAC 5	-	25.1
N Loading Area	-	22.6
P1	-	17.7
P2	-	32.3
P3	-	41.3
S Loading Area	-	51.1
3	EG	50.5
Drive 1	-	27.9
Drive 2	-	38.1
HVAC1	-	6.6
HVAC2	-	10.1
HVAC6	-	8.9
HVAC7	-	13.1
HVAC8	-	18.7
HVAC9	-	8.9
HVAC10	-	13.2
HVAC11	-	18.1

## Contribution levels of the receivers

Source name	Traffic lane	Level Lden dB(A)
HVAC12	-	10.1
HVAC13	-	11.3
HVAC14	-	15.9
HVAC15	-	8.2
HVAC16	-	10.7
HVAC17	-	14.9
HVAC18	-	20.5
HVAC 3	-	12.7
HVAC 4	-	15.9
HVAC 5	-	23.9
N Loading Area	-	25.2
P1	-	17.7
P2	-	39.0
P3	-	22.1
S Loading Area	-	49.8
4	EG	51.4
Drive 1	-	42.9
Drive 2	-	25.3
HVAC1	-	14.5
HVAC2	-	10.5
HVAC6	-	12.1
HVAC7	-	11.8
HVAC8	-	11.4
HVAC9	-	14.2
HVAC10	-	13.8
HVAC11	-	13.3
HVAC12	-	16.9
HVAC13	-	16.2
HVAC14	-	15.6
HVAC15	-	20.8
HVAC16	-	19.8
HVAC17	-	18.4
HVAC18	-	17.1
HVAC 3	-	10.2
HVAC 4	-	10.0
HVAC 5	-	9.7
N Loading Area	-	50.6
P1	-	34.9
P2	-	19.4
P3	-	14.6
S Loading Area	-	22.9
5	EG	53.1
Drive 1	-	42.9
Drive 2	-	30.0
HVAC1	-	22.8
HVAC2	-	20.1
HVAC6	-	17.5
HVAC7	-	15.4
HVAC8	-	13.8
HVAC9	-	16.0
HVAC10	-	14.7
HVAC11	-	12.9
HVAC12	-	13.9
HVAC13	-	13.1
HVAC14	-	12.2
HVAC15	-	12.0
HVAC16	-	11.5
HVAC17	-	10.8
HVAC18	-	10.2
HVAC 3	-	18.1
HVAC 4	-	16.3
HVAC 5	-	14.8
N Loading Area	-	52.3

## Contribution levels of the receivers

Source name	Traffic lane	Level Lden dB(A)
P1	-	37.6
P2	-	17.1
P3	-	39.2
S Loading Area	-	21.4

## Noise emissions of road traffic

Station km	ADT Veh/24h	Vehicles type	Traffic values				Speed km/h	Contr device	Cons Speed km/h	Affec veh. %	Road surface	Gradien Min / Max %
			Vehicle name	day Veh/h	evening Veh/h	night Veh/h						
Drive 1												
Traffic direction: In entry direction												
0+000	97	Total	-	6	6	1	-	none	-	-	Average (of DGAC a	0.0
		Automobiles	-	-	-	-	24					
		Medium trucks	-	2	2	0	24					
		Heavy trucks	-	4	4	1	24					
		Buses	-	-	-	-	-					
		Motorcycles	-	-	-	-	-					
		Auxiliary vehicle	-	-	-	-	-					
Drive 21												
Traffic direction: In entry direction												
0+000	97	Total	-	6	6	1	-	none	-	-	Average (of DGAC a	0.0
		Automobiles	-	-	-	-	-					
		Medium trucks	-	2	2	0	-					
		Heavy trucks	-	4	4	1	-					
		Buses	-	-	-	-	-					
		Motorcycles	-	-	-	-	-					
		Auxiliary vehicle	-	-	-	-	-					
0+029	97	Total	-	6	6	1	-	none	-	-	Average (of DGAC a	0.0
		Automobiles	-	-	-	-	24					
		Medium trucks	-	2	2	0	24					
		Heavy trucks	-	4	4	1	24					
		Buses	-	-	-	-	-					
		Motorcycles	-	-	-	-	-					
		Auxiliary vehicle	-	-	-	-	-					
0+194	97	Total	-	6	6	1	-	none	-	-	Average (of DGAC a	0.0
		Automobiles	-	-	-	-	24					
		Medium trucks	-	2	2	0	24					
		Heavy trucks	-	4	4	1	24					
		Buses	-	-	-	-	-					
		Motorcycles	-	-	-	-	-					
		Auxiliary vehicle	-	-	-	-	-					

## Noise emissions of industry sources

Source name	Reference	Level	dB(A)	Frequency spectrum [dB(A)]										Corrections		
				31 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	16 kHz	Cwall dB	CI dB	CT dB
1	Lw/unit	Day	67.0	-	34.0	44.0	51.1	57.1	60.0	61.0	61.1	59.0	-	-	-	-
	Lw/unit	Day	67.0	-	34.0	44.0	51.1	57.1	60.0	61.0	61.1	59.0	-	-	-	-
3	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
4	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
5	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
6	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
7	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
8	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
9	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
10	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
11	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
12	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
13	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
14	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
13	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-
14	Lw/unit	Day	78.7	42.5	46.5	59.5	64.5	58.5	69.5	71.5	70.5	72.5	72.5	-	-	-

## Noise emissions of parking lot traffic

Name	Parking lot type	Size	Movements per hour			Road surface	Separated method	Lw,ref dB(A)
			Day	Evening	Night			
1	Visitors and staff	44 Parking bays	0.173	0.173	0.200	Asphaltic driving lanes	no	83.3
2	Rest stop (Trucks)	76 Parking bays	0.043	0.043	0.033	Asphaltic driving lanes	no	100.4
3	Rest stop (Trucks)	77 Parking bays	0.043	0.043	0.033	Asphaltic driving lanes	no	100.4
1	Visitors and staff	140 Parking bays	0.173	0.173	0.200	Asphaltic driving lanes	no	89.8

## Receiver list

No.	Receiver name	Building side	Floor	Limit Lden dB(A)	Level w/o NP Lden dB(A)	Level w NP Lden dB(A)	Difference Lden dB	Conflict Lden dB
1	1	-	EG	-	43.0	0.0	-43.0	-
2	2	-	EG	-	41.1	0.0	-41.1	-
3	3	-	EG	-	46.0	0.0	-46.0	-
4	4	-	EG	-	49.2	0.0	-49.2	-
5	5	-	EG	-	46.7	0.0	-46.7	-

## **APPENDIX F**

### **FHWA TRAFFIC NOISE MODEL WORKSHEETS**

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Rider Street**  
 Segment: **West of Redlands Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	9108.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	45.00
	-----									DISTANCE	47.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	527.51	10.93	18.22	391.64	1.82	3.04	97.15	15.18	25.30	% A	92
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
<b>NOISE CALCULATIONS</b>											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	5
<b>ADJUSTMENTS</b>											
Flow	20.38	3.55	5.77	19.09	-4.23	-2.01	13.04	4.97	7.19		
Distance	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	72.77
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.47
LEQ	64.93	56.37	63.11	63.63	48.59	55.33	57.58	57.80	64.53	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	67.47		EVENING LEQ	64.35		NIGHT LEQ	66.04		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>72.77</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Rider Street**  
 Segment: **West of Redlands Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	9168.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	45.00
	-----									DISTANCE	47.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	530.80	11.04	18.41	394.09	1.84	3.07	97.76	15.34	25.56	% A	91.97
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.01
<b>NOISE CALCULATIONS</b>											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	5.02
<b>ADJUSTMENTS</b>											
Flow	20.41	3.59	5.81	19.12	-4.19	-1.97	13.06	5.02	7.24		
Distance	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	72.81
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	67.51
LEQ	64.95	56.41	63.15	63.66	48.63	55.37	57.61	57.84	64.58	Day hour	89.00
										Absorbive?	no
	DAY LEQ	67.51		EVENING LEQ	64.38		NIGHT LEQ	66.08		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>72.81</b>								

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Rider Street**  
 Segment: **East of Redlands Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	11148.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	45.00
-----										DISTANCE	47.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	645.66	13.38	22.30	479.36	2.23	3.72	118.91	18.58	30.97	% A	92
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
<b>NOISE CALCULATIONS</b>											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	5
<b>ADJUSTMENTS</b>											
Flow	21.26	4.43	6.64	19.97	-3.36	-1.14	13.91	5.85	8.07		
Distance	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.65
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.35
LEQ	65.81	57.25	63.98	64.51	49.47	56.20	58.46	58.67	65.41	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	68.35		EVENING LEQ	65.23		NIGHT LEQ	66.91		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>73.65</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Rider Street**  
 Segment: **East of Redlands Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	11448.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	45.00
	-----									DISTANCE	47.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	662.14	13.95	23.24	491.60	2.33	3.87	121.95	19.38	32.28	% A	91.88
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.05
<b>NOISE CALCULATIONS</b>											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	5.08
<b>ADJUSTMENTS</b>											
Flow	21.37	4.61	6.83	20.08	-3.17	-0.96	14.02	6.04	8.25		
Distance	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.81
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.49
LEQ	65.91	57.43	64.17	64.62	49.65	56.38	58.57	58.86	65.59	Day hour	89.00
										Absorbive?	no
	DAY LEQ	68.49		EVENING LEQ	65.35		NIGHT LEQ	67.09		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>73.81</b>								

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Rider Street**  
 Segment: **West of Wilson Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	11028.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	45.00
-----										DISTANCE	47.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	638.71	13.23	22.06	474.20	2.21	3.68	117.63	18.38	30.63	% A	92
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
<b>NOISE CALCULATIONS</b>											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	5
<b>ADJUSTMENTS</b>											
Flow	21.22	4.38	6.60	19.92	-3.40	-1.18	13.87	5.81	8.02		
Distance	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.60
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.30
LEQ	65.76	57.20	63.94	64.47	49.42	56.16	58.41	58.63	65.36	Day hour	89.00
										Absorbitive?	no
	DAY LEQ	68.30		EVENING LEQ	65.18		NIGHT LEQ	66.87		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>73.60</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Rider Street**  
 Segment: **West of Wilson Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	11328.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	45.00
	-----									DISTANCE	47.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	655.19	13.81	23.00	486.44	2.30	3.83	120.67	19.18	31.95	% A	91.88
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.05
<b>NOISE CALCULATIONS</b>											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	5.08
<b>ADJUSTMENTS</b>											
Flow	21.33	4.56	6.78	20.03	-3.22	-1.00	13.98	5.99	8.21		
Distance	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	73.77
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.45
LEQ	65.87	57.38	64.12	64.58	49.60	56.34	58.52	58.81	65.55	Day hour	89.00
										Absorbive?	no
	DAY LEQ	68.45		EVENING LEQ	65.30		NIGHT LEQ	67.04		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>73.77</b>								

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Rider Street**  
 Segment: **East of Wilson Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	12888.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	45.00
	-----									DISTANCE	47.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	746.43	15.47	25.78	554.18	2.58	4.30	137.47	21.48	35.80	% A	92
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
<b>NOISE CALCULATIONS</b>											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	5
<b>ADJUSTMENTS</b>											
Flow	21.89	5.06	7.27	20.60	-2.73	-0.51	14.54	6.48	8.70		
Distance	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.28
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	68.98
LEQ	66.44	57.88	64.61	65.14	50.10	56.83	59.09	59.30	66.04	Day hour	89.00
										Absorbitive?	no
	DAY LEQ	68.98		EVENING LEQ	65.86		NIGHT LEQ	67.54		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>74.28</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**

Road: **Rider Street**

Segment: **East of Wilson Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	13044.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	45.00
										DISTANCE	47.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	755.00	15.77	26.27	560.55	2.63	4.38	139.05	21.90	36.48	% A	91.94
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.02
<b>NOISE CALCULATIONS</b>											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	5.03
<b>ADJUSTMENTS</b>											
Flow	21.94	5.14	7.36	20.65	-2.64	-0.43	14.59	6.57	8.78		
Distance	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	74.35
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	69.04
LEQ	66.48	57.96	64.70	65.19	50.18	56.92	59.14	59.39	66.12	Day hour	89.00
										Absorbive?	no
	DAY LEQ	69.04		EVENING LEQ	65.91		NIGHT LEQ	67.62		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>74.35</b>								

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Placentia Avenue**  
 Segment: **West of Redlands Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	6048.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	40.00
-----										DISTANCE	64.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	350.28	7.26	12.10	260.06	1.21	2.02	64.51	10.08	16.80	% A	92
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
<b>NOISE CALCULATIONS</b>											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5
<b>ADJUSTMENTS</b>											
Flow	19.12	2.28	4.50	17.82	-5.50	-3.28	11.77	3.71	5.93		
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	68.91
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	63.33
LEQ	60.34	52.45	59.52	59.04	44.67	51.74	52.99	53.88	60.94	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	63.33		EVENING LEQ	59.91		NIGHT LEQ	62.27		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>68.91</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Placentia Avenue**  
 Segment: **West of Redlands Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	
										DISTANCE	6624.00
-----											
INPUT PARAMETERS											
Vehicles per hour	381.94	8.36	13.92	283.57	1.39	2.32	70.34	11.62	19.33	% A	91.59
Speed in MPH	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.16
NOISE CALCULATIONS											
Reference levels	67.36	76.31	81.16	67.36	76.31	81.16	67.36	76.31	81.16	% HT	5.25
ADJUSTMENTS											
Flow	19.49	2.90	5.11	18.20	-4.88	-2.67	12.15	4.32	6.54		
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.48
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	63.82
LEQ	60.71	53.07	60.13	59.42	45.29	52.34	53.36	54.49	61.55	Day hour	89.00
										Absorbitive?	no
	DAY LEQ	63.82		EVENING LEQ	60.33		NIGHT LEQ	62.85		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>69.48</b>								

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Placentia Avenue**  
 Segment: **Redlands Avenue to Wilson Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	4008.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	25.00
	-----									DISTANCE	64.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	232.13	4.81	8.02	172.34	0.80	1.34	42.75	6.68	11.13	% A	92
Speed in MPH	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
<b>NOISE CALCULATIONS</b>											
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24	% HT	5
<b>ADJUSTMENTS</b>											
Flow	19.37	2.54	4.75	18.08	-5.25	-3.03	12.02	3.96	6.18		
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	64.50
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	57.96
LEQ	52.67	47.48	55.85	51.38	39.70	48.07	45.32	48.91	57.28	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	57.96		EVENING LEQ	53.24		NIGHT LEQ	58.10		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>64.50</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Placentia Avenue**  
 Segment: **Redlands Avenue to Wilson Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	
										DISTANCE	64.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	272.36	6.22	10.33	202.21	1.04	1.72	50.16	8.63	14.35	% A	91.27
Speed in MPH	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.28
<b>NOISE CALCULATIONS</b>											
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24	% HT	5.45
<b>ADJUSTMENTS</b>											
Flow	20.07	3.65	5.86	18.77	-4.13	-1.93	12.72	5.08	7.28		
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.57
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	58.95
LEQ	53.36	48.59	56.95	52.07	40.81	49.17	46.02	50.02	58.38	Day hour	89.00
										Absorbive?	no
	DAY LEQ	58.95		EVENING LEQ	54.08		NIGHT LEQ	59.19		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>65.57</b>								

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Redlands Avenue**  
 Segment: **North of Rider Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	4656.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	45.00
										DISTANCE	47.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	269.66	5.59	9.31	200.21	0.93	1.55	49.66	7.76	12.93	% A	92
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
<b>NOISE CALCULATIONS</b>											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	5
<b>ADJUSTMENTS</b>											
Flow	17.47	0.63	2.85	16.18	-7.15	-4.93	10.12	2.06	4.28		
Distance	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	69.86
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.56
LEQ	62.01	53.45	60.19	60.72	45.67	52.41	54.67	54.88	61.62	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	64.56		EVENING LEQ	61.43		NIGHT LEQ	63.12		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>69.86</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Redlands Avenue**  
 Segment: **North of Rider Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	
										DISTANCE	47.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	282.85	6.05	10.07	210.00	1.01	1.68	52.09	8.40	13.99	% A	91.77
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.09
<b>NOISE CALCULATIONS</b>											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	5.14
<b>ADJUSTMENTS</b>											
Flow	17.68	0.98	3.19	16.38	-6.80	-4.59	10.33	2.40	4.62		
Distance	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	70.17
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	64.83
LEQ	62.22	53.80	60.53	60.93	46.02	52.75	54.87	55.23	61.96	Day hour	89.00
										Absorbitive?	no
	DAY LEQ	64.83		EVENING LEQ	61.66		NIGHT LEQ	63.44		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>70.17</b>								

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Redlands Avenue**  
 Segment: **South of Placentia Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	6792.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	45.00
	-----									DISTANCE	47.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	393.37	8.15	13.58	292.06	1.36	2.26	72.45	11.32	18.87	% A	92
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3
<b>NOISE CALCULATIONS</b>											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	5
<b>ADJUSTMENTS</b>											
Flow	19.11	2.27	4.49	17.82	-5.51	-3.29	11.76	3.70	5.92		
Distance	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	71.50
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	66.20
LEQ	63.65	55.09	61.83	62.36	47.31	54.05	56.31	56.52	63.26	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	66.20		EVENING LEQ	63.07		NIGHT LEQ	64.76		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>71.50</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Redlands Avenue**  
 Segment: **South of Placentia Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	6948.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	45.00
										DISTANCE	47.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	401.94	8.45	14.08	298.42	1.41	2.35	74.03	11.74	19.55	% A	91.89
Speed in MPH	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	3.04
<b>NOISE CALCULATIONS</b>											
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14	% HT	5.07
<b>ADJUSTMENTS</b>											
Flow	19.20	2.43	4.65	17.91	-5.35	-3.13	11.86	3.86	6.07		
Distance	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	71.64
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	66.32
LEQ	63.75	55.25	61.99	62.45	47.47	54.21	56.40	56.68	63.41	Day hour	89.00
										Absorbive?	no
	DAY LEQ	66.32		EVENING LEQ	63.18		NIGHT LEQ	64.91		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>71.64</b>								

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Wilson Avenue**  
 Segment: **South of Rider Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	2316.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
	-----									DISTANCE	33.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	142.04	1.74	0.68	104.97	0.31	0.31	26.29	2.32	0.90	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
<b>NOISE CALCULATIONS</b>											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
<b>ADJUSTMENTS</b>											
Flow	15.78	-3.35	-7.45	14.46	-10.86	-10.85	8.45	-2.10	-6.20		
Distance	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	62.34
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	58.64
LEQ	57.62	48.21	49.33	56.31	40.71	45.93	50.30	49.46	50.58	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	58.64		EVENING LEQ	56.80		NIGHT LEQ	54.91		Use hour?	no
		<b>CNEL</b>	<b>62.34</b>							GRADE dB	0.00

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Wilson Avenue**  
 Segment: **South of Rider Street**

	DAYTIME			EVENING			NIGHTTIME			ADT	
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	
										DISTANCE	2772.00
-----											
INPUT PARAMETERS											
Vehicles per hour	167.11	2.63	2.10	123.49	0.47	0.96	30.93	3.51	2.79	% A	95.74
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.33
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	1.92
ADJUSTMENTS											
Flow	16.48	-1.55	-2.53	15.17	-9.06	-5.93	9.16	-0.30	-1.28		
Distance	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	64.89
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	60.20
LEQ	58.33	50.01	54.25	57.01	42.51	50.85	51.00	51.26	55.50	Day hour	89.00
										Absorbitive?	no
	DAY LEQ	60.20		EVENING LEQ	58.08		NIGHT LEQ	57.88		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>64.89</b>								

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Wilson Avenue**  
 Segment: **North of North Project Driveway**

	DAYTIME			EVENING			NIGHTTIME			ADT	3912.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
	-----									DISTANCE	33.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	239.92	2.93	1.14	177.31	0.52	0.52	44.41	3.91	1.52	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
<b>NOISE CALCULATIONS</b>											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
<b>ADJUSTMENTS</b>											
Flow	18.05	-1.07	-5.17	16.74	-8.58	-8.57	10.73	0.18	-3.92		
Distance	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	64.62
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	60.91
LEQ	59.90	50.49	51.61	58.59	42.98	48.21	52.57	51.74	52.86	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	60.91		EVENING LEQ	59.07		NIGHT LEQ	57.19		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>64.62</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Wilson Avenue**  
 Segment: **North of North Project Driveway**

	DAYTIME			EVENING			NIGHTTIME			ADT	
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	
										DISTANCE	33.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	264.99	3.83	2.56	195.83	0.68	1.17	49.05	5.10	3.41	% A	96.35
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.15
<b>NOISE CALCULATIONS</b>											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	1.49
<b>ADJUSTMENTS</b>											
Flow	18.49	0.08	-1.66	17.17	-7.43	-5.06	11.16	1.33	-0.41		
Distance	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	66.30
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	61.90
LEQ	60.33	51.64	55.12	59.02	44.13	51.72	53.00	52.89	56.37	Day hour	89.00
										Absorbitive?	no
	DAY LEQ	61.90		EVENING LEQ	59.88		NIGHT LEQ	59.18		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>66.30</b>								

Existing Traffic Noise

Project: 19484 Placentia Avenue Industrial Project

Road: Wilson Avenue

Segment: North Project Driveway to Central Project Driveway

	DAYTIME			EVENING			NIGHTTIME			ADT	3912.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
	-----									DISTANCE	33.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	239.92	2.93	1.14	177.31	0.52	0.52	44.41	3.91	1.52	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
<b>NOISE CALCULATIONS</b>											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
<b>ADJUSTMENTS</b>											
Flow	18.05	-1.07	-5.17	16.74	-8.58	-8.57	10.73	0.18	-3.92		
Distance	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	64.62
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	60.91
LEQ	59.90	50.49	51.61	58.59	42.98	48.21	52.57	51.74	52.86	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	60.91		EVENING LEQ	59.07		NIGHT LEQ	57.19		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>64.62</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**

Road: **Wilson Avenue**

Segment: **North Project Driveway to Central Project Driveway**

	DAYTIME			EVENING			NIGHTTIME			ADT	
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	
										DISTANCE	33.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	258.39	3.59	2.19	190.95	0.64	1.00	47.83	4.79	2.92	% A	96.60
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.07
<b>NOISE CALCULATIONS</b>											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	1.31
<b>ADJUSTMENTS</b>											
Flow	18.38	-0.19	-2.35	17.06	-7.70	-5.74	11.05	1.06	-1.10		
Distance	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	65.91
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	61.66
LEQ	60.22	51.37	54.43	58.91	43.86	51.04	52.89	52.62	55.68	Day hour	89.00
										Absorbive?	no
	DAY LEQ	61.66		EVENING LEQ	59.68		NIGHT LEQ	58.74		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>65.91</b>								

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Wilson Avenue**  
 Segment: **Central Project Driveway to South Project Driveway**

	DAYTIME			EVENING			NIGHTTIME			ADT	3912.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
	-----									DISTANCE	33.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	239.92	2.93	1.14	177.31	0.52	0.52	44.41	3.91	1.52	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
<b>NOISE CALCULATIONS</b>											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
<b>ADJUSTMENTS</b>											
Flow	18.05	-1.07	-5.17	16.74	-8.58	-8.57	10.73	0.18	-3.92		
Distance	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	64.62
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	60.91
LEQ	59.90	50.49	51.61	58.59	42.98	48.21	52.57	51.74	52.86	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	60.91		EVENING LEQ	59.07		NIGHT LEQ	57.19		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>64.62</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Wilson Avenue**  
 Segment: **Central Project Driveway to South Project Driveway**

	DAYTIME			EVENING			NIGHTTIME			ADT	
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	
										DISTANCE	33.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	292.03	4.79	4.09	215.82	0.85	1.87	54.06	6.38	5.46	% A	95.43
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.42
<b>NOISE CALCULATIONS</b>											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	2.14
<b>ADJUSTMENTS</b>											
Flow	18.91	1.06	0.37	17.59	-6.45	-3.02	11.58	2.30	1.62		
Distance	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	67.59
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	62.77
LEQ	60.75	52.62	57.15	59.44	45.11	53.76	53.43	53.87	58.40	Day hour	89.00
										Absorbive?	no
	DAY LEQ	62.77		EVENING LEQ	60.60		NIGHT LEQ	60.63		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>67.59</b>								

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Wilson Avenue**  
 Segment: **South Project Driveway to Placentia Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	3912.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
	-----									DISTANCE	33.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	239.92	2.93	1.14	177.31	0.52	0.52	44.41	3.91	1.52	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
<b>NOISE CALCULATIONS</b>											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
<b>ADJUSTMENTS</b>											
Flow	18.05	-1.07	-5.17	16.74	-8.58	-8.57	10.73	0.18	-3.92		
Distance	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	64.62
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	60.91
LEQ	59.90	50.49	51.61	58.59	42.98	48.21	52.57	51.74	52.86	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	60.91		EVENING LEQ	59.07		NIGHT LEQ	57.19		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>64.62</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Wilson Avenue**  
 Segment: **South Project Driveway to Placentia Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	
										DISTANCE	4740.00
-----											
INPUT PARAMETERS											
Vehicles per hour	285.44	4.55	3.72	210.94	0.81	1.70	52.84	6.07	4.96	% A	95.64
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	2.36
NOISE CALCULATIONS											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	1.99
ADJUSTMENTS											
Flow	18.81	0.84	-0.04	17.50	-6.67	-3.44	11.48	2.09	1.21		
Distance	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	67.30
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	62.57
LEQ	60.65	52.40	56.74	59.34	44.89	53.34	53.33	53.65	57.99	Day hour	89.00
										Absorbive?	no
	DAY LEQ	62.57		EVENING LEQ	60.44		NIGHT LEQ	60.32		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>67.30</b>								

Existing Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**

Road: **Wilson Avenue**

Segment: **South of Placentia Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	2676.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
	-----									DISTANCE	33.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	164.12	2.01	0.78	121.29	0.36	0.36	30.38	2.68	1.04	% A	97.4
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.84
<b>NOISE CALCULATIONS</b>											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.74
<b>ADJUSTMENTS</b>											
Flow	16.41	-2.72	-6.82	15.09	-10.23	-10.22	9.08	-1.47	-5.57		
Distance	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	62.97
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.26
LEQ	58.25	48.84	49.96	56.94	41.33	46.56	50.92	50.09	51.21	Day hour	89.00
										Absorbtive?	no
	DAY LEQ	59.26		EVENING LEQ	57.43		NIGHT LEQ	55.54		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>62.97</b>								

Existing Plus Project Traffic Noise

Project: **19484 Placentia Avenue Industrial Project**  
 Road: **Wilson Avenue**  
 Segment: **South of Placentia Avenue**

	DAYTIME			EVENING			NIGHTTIME			ADT	2772.00
	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	AUTOS	M.TRUCKS	H.TRUCKS	SPEED	35.00
	-----									DISTANCE	33.00
<b>INPUT PARAMETERS</b>											
Vehicles per hour	169.39	2.19	1.08	125.19	0.39	0.49	31.36	2.93	1.44	% A	97.05
Speed in MPH	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00		
Left angle	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00	-90.00		
Right angle	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	90.00	% MT	1.94
<b>NOISE CALCULATIONS</b>											
Reference levels	65.11	74.83	80.05	65.11	74.83	80.05	65.11	74.83	80.05	% HT	0.99
<b>ADJUSTMENTS</b>											
Flow	16.54	-2.33	-5.41	15.23	-9.84	-8.81	9.22	-1.08	-4.16		
Distance	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	LEFT	-90.00
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	RIGHT	90.00
Barrier	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CNEL	63.56
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	DAY LEQ	59.59
LEQ	58.39	49.23	51.37	57.07	41.72	47.97	51.06	50.48	52.62	Day hour	89.00
										Absorbitive?	no
	DAY LEQ	59.59		EVENING LEQ	57.69		NIGHT LEQ	56.25		Use hour?	no
										GRADE dB	0.00
		<b>CNEL</b>	<b>63.56</b>								

### Existing and Project ADT'S BY LEG

FACTOR= 12.0      Use 10 (LA County), 12 (Riverside), or 11.5 (SB)

Intersection	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG	
<b>Existing</b>																		
1. Redlands Avenue NS / Rider Street EW	16	77	98	36	194	24	14	362	16	63	327	43	1,270	4,656	5,568	11,148	9,108	
2. Redlands Avenue NS / Placentia Avenue EW	67	135	17	43	225	38	47	170	104	18	78	8	950	5,952	6,792	4,008	6,048	
3. Wilson Avenue NS / Rider Street EW	9	0	99	0	0	0	0	483	10	75	417	0	1,093	-	2,316	12,888	11,028	
4. Wilson Avenue NS / Placentia Avenue EW	30	43	3	2	58	28	61	79	87	2	47	7	447	2,388	2,676	1,680	3,984	
5. Wilson Avenue NS / Project North Driveway EW	0	200	0	0	126	0	0	0	0	0	0	0	326	3,912	3,912	-	-	
6. Wilson Avenue NS / Project Central Driveway EW	0	200	0	0	126	0	0	0	0	0	0	0	326	3,912	3,912	-	-	
7. Wilson Avenue NS / Project South Driveway EW	0	200	0	0	126	0	0	0	0	0	0	0	326	3,912	3,912	-	-	
<b>Project</b>																		
1. Redlands Avenue NS / Rider Street EW	0	0	0	10	0	0	0	2	0	0	3	10	25	240	-	300	60	
2. Redlands Avenue NS / Placentia Avenue EW	0	0	5	0	0	0	0	19	0	8	29	0	61	-	156	732	576	
3. Wilson Avenue NS / Rider Street EW	13	0	8	0	0	0	0	0	12	5	0	0	38	-	456	156	300	
4. Wilson Avenue NS / Placentia Avenue EW	0	3	0	0	5	37	24	0	0	0	0	0	69	828	96	-	732	
5. Wilson Avenue NS / Project North Driveway EW	0	16	0	5	12	0	0	0	0	0	0	5	38	456	336	120	-	
6. Wilson Avenue NS / Project Central Driveway EW	0	5	27	7	5	0	0	0	0	42	0	11	97	336	948	1,044	-	
7. Wilson Avenue NS / Project South Driveway EW	0	27	0	5	42	0	0	0	0	0	0	5	79	948	828	120	-	

## **APPENDIX G**

### **GROUNDBORNE VIBRATION WORKSHEETS**

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19484 Placentia Avenue Industrial Project	Date:	3/11/22
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Residential to South		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment = Type	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	85.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.033	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19484 Placentia Avenue Industrial Project	Date:	3/11/22
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Residential to South		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment = Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	85.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.014	IN/SEC	OUTPUT IN BLUE



**GANDDINI GROUP INC.**

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