BURRTEC C&D PROCESSING FACILITY NOISE IMPACT ANALYSIS

March 3, 2025

City of Victorville

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

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Project No. 19739

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EXECUTIVE SUMMARY

Existing Noise Environment

Sensitive receptors that may be affected by project generated noise include the existing park use located adjacent to the east, the church uses located adjacent to the north and 740 feet southeast, the transient lodging uses located approximately 1,684 feet to the southeast, the single-family residential uses located adjacent to the southeast and approximately 803 feet to the northeast, and the multi-family residential uses located approximately 1,314 feet to the northeast of the project site.

Measured short-term ambient noise levels in the project vicinity ranged between 45.5 and 69.3 dBA L_{eq}. The dominant noise source in the project vicinity was vehicle traffic associated with Stoddard Wells Road and Dante Street and industrial noise from garbage trucks moving within the project site area.

Project Construction Impacts – Onsite Equipment

Modeled onsite construction noise levels range between 43.5 and 73.8 dBA L_{eq} at residential land uses located northeast and southeast of the project; 57.4 and 71.1 dBA L_{eq} at the park land use located east of the project; 47.2 and 75.9 dBA L_{eq} at church land uses located north and southeast of the project; 42.1 and 55.8 dBA L_{eq} at the transient lodging land use located southeast of the project; and 52.8 and 70.9 dBA L_{eq} at industrial land uses located east, west, and southwest of the project. Construction noise will not exceed the Federal Transit Authority (FTA) daytime construction noise threshold for impacts to commercial land uses (85 dBA $L_{eq\ (8\text{-}hr)}$) or the FTA daytime construction noise threshold for impacts to residential land uses (80 dBA $L_{eq\ (8\text{-}hr)}$). The City of Victorville exempts noise associated with construction unless the Director of Building and Safety determines that the activity is not essential to complete the project. Therefore, the project would not exceed either City-established standards or FTA standards relating to construction noise. Notwithstanding the above, Best Management Practices (BMPs) provided in the Project Description can be added to project plans and in contract specifications to further minimize the already less than significant construction noise impacts. The project impact is less than significant; no mitigation is required.

Project Construction Impacts – Offsite Vehicle Trips

Project vehicle traffic generated during construction is 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

Based on the operational noise modeling, project operation is expected to range between 33 and 56 dBA L_{eq} at the property line of nearby parcels. Modeled project operational noise levels would be below the City's Municipal Code daytime and nighttime noise standards for residential and industrial uses. Therefore, project operational noise impacts would be less than significant, and no mitigation is required.

Operational Noise Impacts – Offsite Vehicle Trips

Modeled existing traffic noise levels range between 49-67 dBA CNEL and the modeled Existing Plus Project traffic noise levels range between 51-67 dBA CNEL at the right-of-way of each study roadway segment. For all the modeled roadway segments, the addition of project trips is not expected to change noise levels more than the applicable increase threshold. The project impact is less than significant; no mitigation is required.

Groundborne Vibration Impacts

Based on the groundborne vibration modeling, use of a vibratory roller is expected to generate a PPV of 0.059 in/sec and use of a bulldozer is expected to generate a PPV of 0.025 in/sec at the closest off-site building, a residential structure located as close as approximately 58 feet southeast of the project site boundaries. 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.

Air Traffic Impacts

There are no airports within two miles of the project site. The closest airport to the project site is the Southern California Logistics Airport (SCLA), with airport runways located as close as approximately 4.82 miles northwest of the project site. The City of Victorville Southern California Logistics Airport Specific Plan Exhibit 2.3, Long Range Noise Contours, shows that the project site is well outside the 60 dBA CNEL noise contour for the SCLA. 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 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 Victorville, 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 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 Abbey Lane between E. Abbey Lane (Bimini Street) and Stoddard Wells Road in the City of Victorville, California. The project site occurs on four parcels (Assessor's Parcel's Number 0472-181-16, 0472-181-23, 0472-181-65, and the north portion of 0472-181-15) totaling 6.09 gross acres. The project site is within the Desert Gateway Specific Plan and is designated Light Industrial (M-1). The property is vacant except for a single-family residence located on APN 0472-181-15. A vicinity map showing the project location is provided on Figure 1.

PROJECT DESCRIPTION

Burrtec Waste Industries, Inc. is requesting approval of a Site Plan and Conditional Use Permit for construction and operation of a Construction, Demolition, and Inerts Processing (CDI) facility. The proposed project involves the demolition of the existing single-family residence and the construction of an approximately 40,500 square-foot industrial building that will house sorting equipment to process recoverable materials from construction and demolition projects from throughout the High Desert. A 2,700 square foot office building is attached to the south side of the processing building. The office includes administrative offices, employee breakrooms, locker rooms, and restrooms. A 2,000-square-foot maintenance shop would be located on the northeast corner of the project site. A future scale house and two 70-foot-long truck scales are proposed on the Abbey Lane frontage. 34 parking spaces are provided along the E. Abbey Lane frontage for facility employees and visitors. This will also serve as additional employee parking for the adjacent Material Recovery/Compost Facility (MRF).

Project History and Background

Currently, trucks from the adjacent Burrtec Victor Valley Materials Recovery Facility/Compost Facility (MRF) are picking up construction and demolition waste from construction sites and delivering them to the Victorville landfill. With the proposed project, the construction and demolition waste would be delivered to the proposed CDI facility to be processed instead of to the landfill.

Proposed Operations

Burrtec Waste Industries, Inc. is proposing the construction and operation of a Construction/Demolition and Inerts (CDI) facility adjacent to and east of the existing Burrtec MRF recycling facility. As proposed, material sorting would occur within a 40,500 square foot building. The CDI facility is designed to recover recyclable materials such as cardboard, metals, drywall, plastics, and inerts from loads of construction and demolition wastes. Trucks with loads of construction and demolition wastes enter the industrial building through two roll-up doors on the west side and dump their loads onto the concrete tipping pad. The loads are then inspected for hazardous materials, which are removed and temporarily stored until removed from the site by a licensed contractor. If it can be determined which customer delivered the hazardous material to the site, it is returned to the customer. Figure 2 illustrates the project site plan.

The material is then fed onto a shaker screen using a tracked excavator or bucket loader. After smaller materials ("fines") are removed using the shaker screen, the remaining material would be conveyed to an elevated sort line where recyclables and residual wastes are removed from inert materials via a series of manual pick stations. Sorted recyclables are placed in bins or roll-off boxes. Recyclables such as cardboard, metals, and plastics are moved to the existing MRF, west of the CDI facility, where they are incorporated into separate commodities and baled for shipping to offsite users. Recoverable untreated and unpainted wood and drywall are moved to the green waste processing area within the industrial building. The remaining inert materials such as concrete and asphalt are loaded into roll-off boxes or trailers and transferred to an offsite inerts processor. Remaining residue is placed in roll-off boxes or transfer trailers and transferred to Victorville Sanitary landfill for disposal.

Standard operating hours for the facility will be:

Material Receipt	Monday - Saturday	5:00 AM – 7:00 PM
Material Processing	Monday - Saturday	24 Hours
Administrative Office	Monday - Friday	8:00 AM - 5:00 PM
Maintenance	Monday - Sunday	24 Hours

The facility will typically run a single daily shift Monday through Friday 7:00 AM to 5:00 PM. Occasional second shifts may be required to run during evenings and weekends to address unusual peak loadings.

A standard daily shift will involve 20 employees as follows:

Employee	Quantity
Site Manager	1
Office Clerk	1
Equipment Operators	4
Sorters/Laborers	10
Traffic Control	1
Drivers	2
Mechanic	1
Total Employees	20

If necessary, additional staff may be brought to the site from the adjacent MRF/compost facility.

The following equipment will be used at the facility:

Equipment Type	Quantity
Excavator	1
Front-End Bucket Loader	1
Bobcat Loader	1

Roll Off Truck	1
Transfer Truck/Trailer	1
Pick Up Truck	1
Sort Line	1

Access

The facility has three driveway entrances. Two driveways are located along the E. Abbey Lane Street frontage on the west side of the property with a third driveway along Abbey Lane on the south side of the property.

Construction Schedule

Project construction is anticipated to begin in early 2025 and be completed in the third quarter of 2025.

Best Management Practices

The following best management practices (BMPs) can be provided on project plans and in contract specifications to minimize construction noise emanating from the proposed project:

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 during construction.



Figure 1
Project Location Map

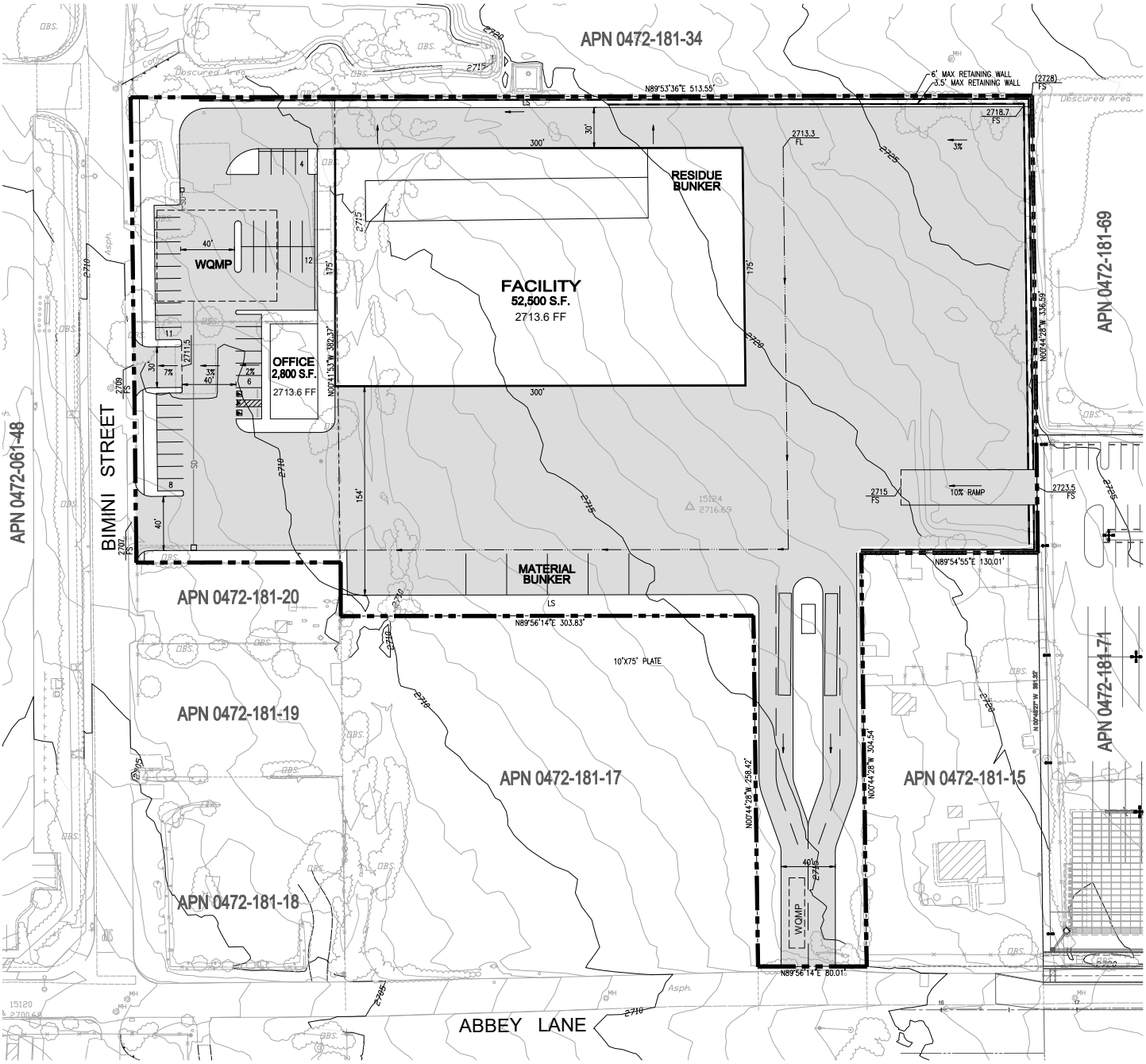

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Figure 3
Site Plan

2. NOISE AND VIBRATION FUNDAMENTALS

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 3 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, $L_{eq(3\text{-}hr)}$ 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 weighs 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

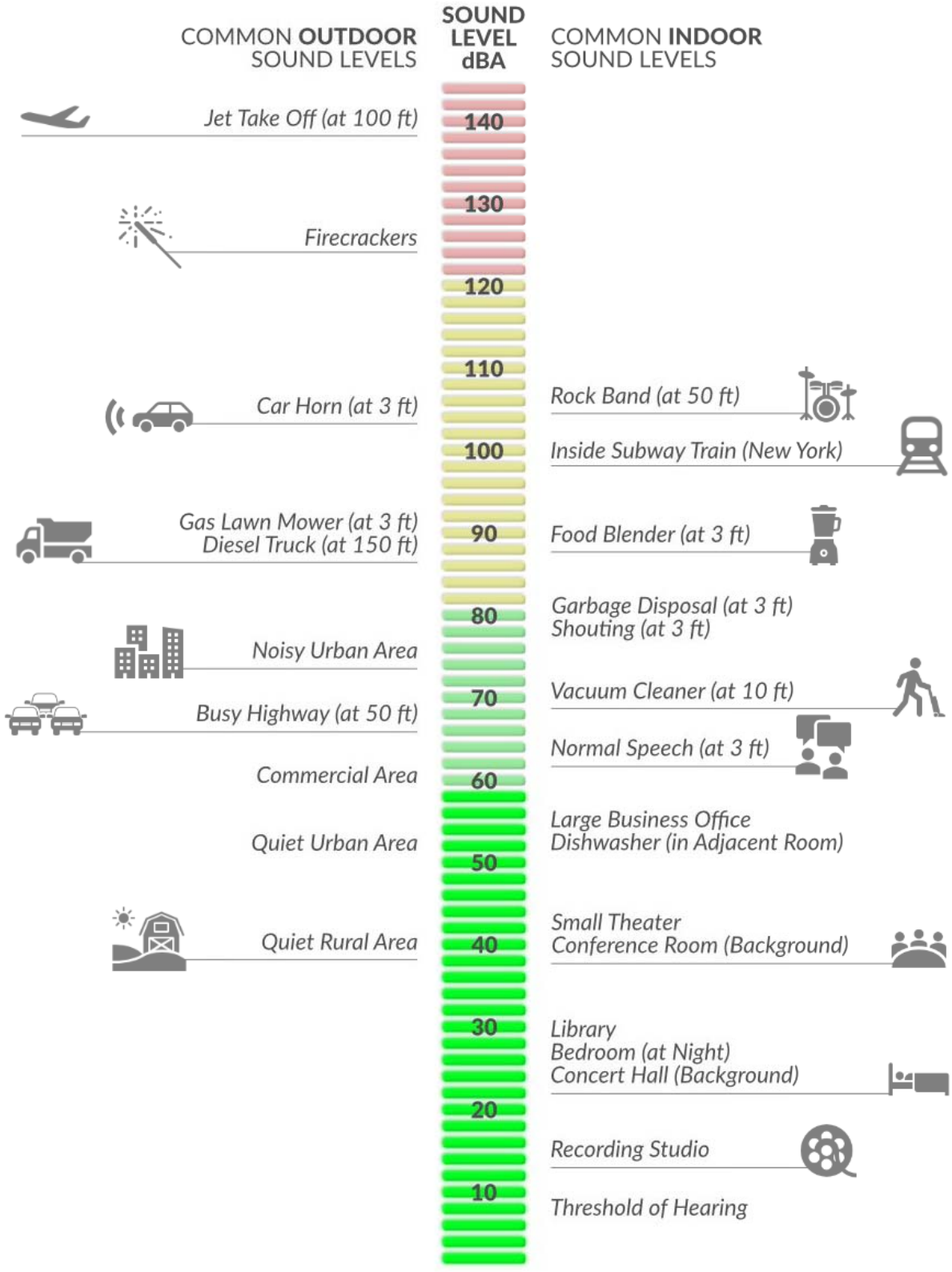
The way in which vibration is transmitted through the earth is called propagation. Propagation of earthborn vibrations is complicated and difficult to predict because of the endless variations in the soil through which

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 4 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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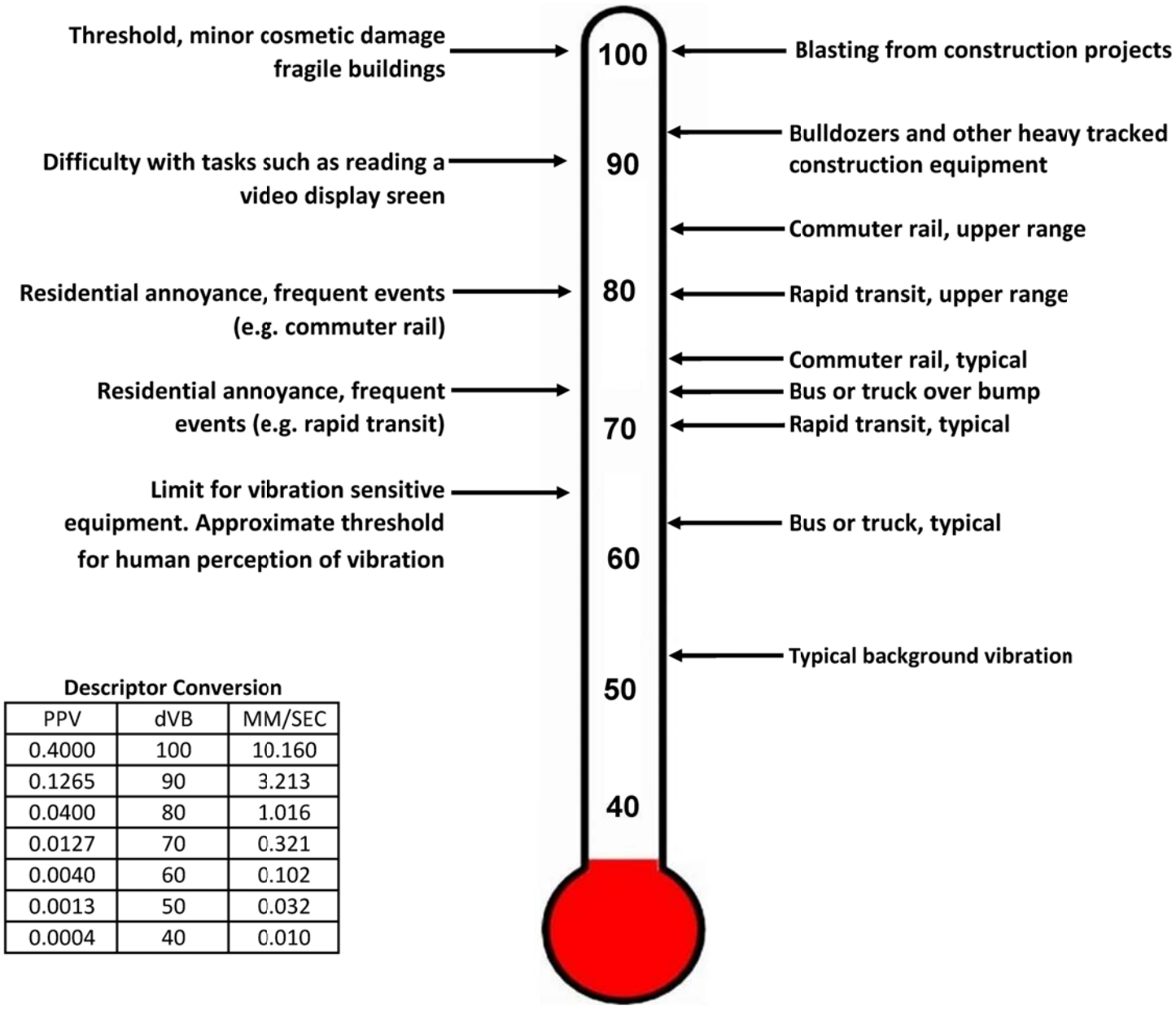
Based on Policy & Guidance from Federal Aviation Administration

Figure 3
A-Weighted Comparative Sound Levels



Descriptor Conversion

PPV	dVB	MM/SEC
0.4000	100	10.160
0.1265	90	3.213
0.0400	80	1.016
0.0127	70	0.321
0.0040	60	0.102
0.0013	50	0.032
0.0004	40	0.010

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.

Figure 4
Typical Levels of Groundborne Vibration

3. EXISTING NOISE ENVIRONMENT

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

EXISTING LAND USES AND SENSITIVE RECEPTORS

The project site is bordered by vacant land to the north, Victor Valley MFR/Compost Facility to the west, vacant land and Abbey Lane to the south, and Burrtec waste hauling yard, a residential use, and Grady Trammel Park to the east of the project site.

Specifically, the project site is surrounded by the following land uses within the City of Victorville:

- North– Vacant, church (Zoned M-1, Light Industrial)
- East– Park (Zoned P-C, Public and Civic); Burrtec Waste hauling yard (Zoned M-1, Light Industrial)
- South– Vacant (Zoned M-1, Light Industrial)
- West– Burrtec Victor Valley MRF/Compost Facility, City Water Well Site (Zoned M-2, Heavy Industrial)

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 the existing park use located adjacent to the east, the church uses located adjacent to the north and 740 feet southeast, the transient lodging uses located approximately 1,684 feet to the southeast, the single-family residential uses located adjacent to the southeast and approximately 803 feet to the northeast, and the multi-family residential uses located approximately 1,314 feet to the northeast of the project site.

AMBIENT NOISE MEASUREMENTS

An American National Standards Institute (ANSI Section SI.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, seven (7) 15-minute daytime noise measurements were taken between 11:16 AM and 3:52 PM on August 15, 2024. Figure 5 shows the noise measurement location map. Field worksheets and noise measurement worksheets are provided in Appendix C

As shown on Figure 5, the noise meter was placed at the following locations:

- STNM1: represents the existing noise environment of the transient lodging use located to the southeast of the project site along Stoddard Wells Road (Hill Top Inn and Suites, 16901 Stoddard Wells Road, Victorville). The noise meter was placed near the northwestern property line of the transient lodging use just east of Stoddard Wells Road.

- STNM2: represents the existing noise environment of the church use located to the southeast of the project site along Stoddard Wells Road (Spirit of Christ Tabernacle, 17111 Stoddard Wells Road, Victorville). The noise meter was placed near the western property line of the church use just east of Stoddard Wells Road.

- STNM3: represents the existing noise environment of the church use located to the northeast of the project site along Stoddard Wells Road (Emmanual Temple CME, 17288 Stoddard Wells Road, Victorville). The noise meter was placed near the southeastern property line of the church use just west of Stoddard Wells Road.

- STNM4: represents the existing noise environment of the single-family and multi-family residential uses located to the northeast of the project site along Dante Street (17251 Dante Street, Victorville). The noise meter was placed just northwest of the property line of the multi-family residential uses and south of Dante Street.

- STNM5: represents the existing noise environment of the single-family residential use located to the southeast of the project site along the northern side of Abbey Lane (16992 Abbey Lane, Victorville). The noise meter was placed near the western property line of the residential use and north of Abbey Lane.

- STNM6: represents the existing noise environment of the park use located to the east of the project site (17074 to 17078 Stoddard Wells Rd, Victorville). The noise meter was placed near the western property line of the park use.

- STNM7: represents the existing noise environment of the northwestern portion of the project site. The noise meter was placed near the northwestern corner project site.

Table 1 provides a summary of the short-term ambient noise data. Measured short-term ambient noise levels ranged between 45.5 and 69.3 dBA L_{eq}. The dominant noise source in the project vicinity was vehicle traffic associated with Stoddard Wells Road and Dante Street and industrial noise from garbage trucks moving within the project site area.

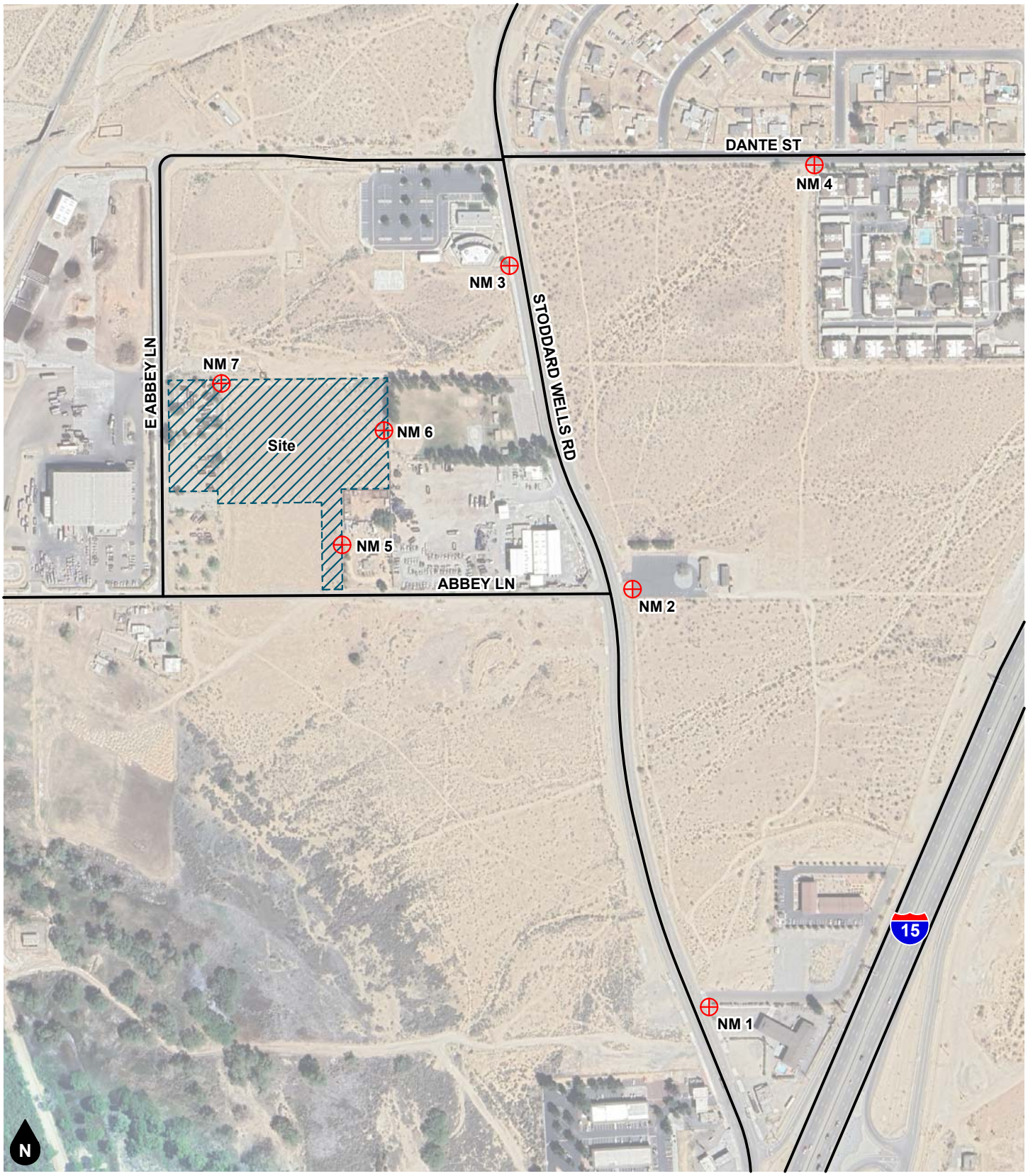
Table 1
Short-Term Noise Measurement Summary

Daytime Measurements (dBA)[1,2]								
Site Location	Time Started	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)
STNM1	11:16 AM	69.3	84.6	49.7	78.6	74.3	67.0	58.5
STNM2	11:50 AM	67.4	89.2	46.2	75.7	71.7	66.2	58.2
STNM3	12:54 PM	67.8	84.4	44.8	78.8	72.6	62.8	51.5
STNM4	1:32 PM	56.1	72.7	44.5	67.2	59.9	50.1	48.1
STNM5	2:33 PM	55.9	67.4	46.7	63.6	59.9	56.6	52.5
STNM6	3:05 PM	45.5	56.0	40.8	49.6	48.0	46.2	44.9
STNM7	3:37 PM	56.5	72.5	45.8	63.1	59.7	56.9	54.2

Notes:

(1) See Figure 5 for noise measurement locations. Each noise measurement was performed over a 15-minute duration.

(2) Noise measurements performed on August 15, 2024.



Legend

⊕ Noise Measurement Location

NM 1

Figure 5
Noise Measurement Location Map

4. REGULATORY SETTING

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.

Federal Transit Administration

Transit and Construction Noise

FTA standards and criteria for assessing noise impacts related to transit projects are based on community reactions to noise. The criteria reflect changes in noise exposure using a sliding scale where the higher the level of existing noise, the smaller increase in total noise exposure is allowed. Some land use activities are more sensitive to noise than others, such as parks, churches and residences, as compared to industrial and commercial uses. FTA Noise Impact Criteria groups sensitive land uses into the three categories described below.

(1) Category 1 – High Sensitivity: Land where quiet is an essential element of its intended purpose. Example land uses include preserved land for serenity and quiet, outdoor amphitheaters and concert pavilions, and national historic landmarks with considerable outdoor use. Recording studios and concert halls are also included in this category.
(2) Category 2 – Residential: This category is applicable all residential land use and buildings where people normally sleep, such as hotels and hospitals.
(3) Category 3 – Institutional: This category is applicable to institutional land uses with primarily daytime and evening use. Example land uses include schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds, and recreational facilities are also included in this category.

Most commercial or industrial uses are not considered noise-sensitive because activities within these buildings are generally compatible with higher noise levels. Business can be considered noise-sensitive if low noise levels are an important part of operations, such as sound and motion picture recording studios. Most parks used primarily for active recreation such as sports complexes and bike or running paths are not considered noise sensitive. However, some parks (even some in dense urban areas) are primarily used for passive recreation such as reading, conversation, or meditation. These places, which may be valued as havens from the noise and rapid pace of everyday city life, are treated as noise-sensitive, and are included in land use Category 3. Non-sensitive uses do not require noise impact assessment.

Construction noise is assessed using guidance provided in the FTA Guidance Manual. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction. For residential uses, the daytime noise threshold is 80 dBA L_{eq} averaged over an 8-hour period ($L_{eq\ (8\text{-}hr)}$; and the nighttime noise threshold is 70 dBA $L_{eq\ (8\text{-}hr)}$. For commercial uses, the daytime and nighttime noise threshold is 85 dBA $L_{eq\ (8\text{-}hr)}$ and for industrial uses the daytime and nighttime noise threshold is 90 dBA $L_{eq\ (8\text{-}hr)}$.

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 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.

California Department of Transportation (Caltrans)

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 2 and Table 3 show the guideline criteria for potential damage and annoyance resulting from groundborne vibration. As shown in Table 2, 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 3 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 Victorville General Plan

The City of Victorville adopted their General Plan 2030 in 2008. The Noise Element of the General Plan includes the following noise-related goals, objectives and policies that are applicable to implementation of the proposed project.

Goal 1 **Noise Sensitivity** – Identify significant noise sources that could adversely affect community.

Objective 1.1 Locate noise sensitive land uses away from existing excessive noise sources and locate new excessive noise generators away from existing sensitive land uses.

Policy 1.1.1 Implement Table 4 regarding placement of new land uses.

Policy 1.1.2 Continue to ensure that there is no conflict or inconsistency between the operation of the Southern California Logistics Airport and future land uses within the Planning Area.

Goal 2 **Noise Control** – Manage the effects of noise emissions to help ensure reduction of adverse effects on the community.

Objective 2.1 Ensure existing and future noise sources are properly attenuated.

Policy 2.1.1 Continue to implement acceptable standards for noise for various land uses throughout the City.

City of Victorville Municipal Code

13.01.040 Base ambient noise levels.

All ambient noise measurements shall commence in decibels within the respective zones and times as shown in Table 5. If the ambient noise level exceeds the applicable limit as noted in Table 5, the ambient noise level shall be the standard.

The Project Site is surrounded by the following land uses within the City of Victorville:

- North– Vacant, church (Zoned M-1, Light Industrial)
- East– Park (Zoned P-C, Public and Civic); Burrtec Waste hauling yard (Zoned M-1, Light Industrial)
- South– Vacant (Zoned M-1, Light Industrial)
- West– Burrtec Victor Valley MRF/Compost Facility, City Water Well Site (Zoned M-2, Heavy Industrial)

13.01.050 Noise levels prohibited.

Noise levels shall not exceed the ambient noise levels in Section 13.01.040 by the following dB(A) levels for the cumulative period of time specified:

1) Less than 5dB(A) for a cumulative period of more than thirty minutes in any hour;
2) Less than 10 dB(A) for a cumulative period of more than fifteen minutes in any hour;
3) Less than 15 dB(A) for a cumulative period of more than five minutes in any hour;
4) Less than 20 dB(A) for a cumulative period of more than one minute in any hour;
5) 20 dB(A) or more for any period of time.

13.01.060 Noise source exemptions.

The following activities shall be exempted from the provisions of this chapter:

(1) All mechanical devices, apparatus or equipment used, related to or connected with emergency machinery, vehicle or work.
(2) The provisions of this regulation shall not preclude the construction, operation, maintenance and repairs of equipment, apparatus or facilities of park and recreation projects, public works projects or essential public works services and facilities, including those utilities subject to the regulatory jurisdiction of the California Public Utilities Commission.

(3) Activities conducted on the grounds of any elementary, intermediate or secondary school or college.
(4) Outdoor gatherings, public dances and shows, provided said events are conducted pursuant to a permit as required by this code.
(5) Activities conducted in public parks and public playgrounds, provided said events are conducted pursuant to a permit as required by this code.
(6) Any activity to the extent regulation thereof has been preempted by state or federal law.
(7) Traffic on any roadway or railroad right-of-way.
(8) The operation of the Southern California Logistics Airport.
(9) Construction activity on private properties that are determined by the director of building and safety to be essential to the completion of a project.

Table 2
Guideline Vibration Damage Potential Threshold Criteria

Structure Condition	Maximum PPV (in/sec)	
	Transient Sources[1]	Continuous/Frequent Intermittent Sources[1]
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 3
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 4
City of Victorville Land Use Compatibility Standards

Land Use Categories	Community Noise Exposure Ldn or CNEL, dB						
	55	60	65	70	75	80+	
Residential - Low Density, Single Family, Duplex, Multifamily, Mobile Home	1	1	2	2	3	4	4
Transient Lodging- Motel, Hotels	1	1	2	2	3	3	4
Schools, Libraries, Churches, Hospitals, Nursing Homes	1	1	2	3	3	4	4
Auditoriums, Concert Halls, Amphitheatres	2	2	3	3	4	4	4
Sports Arena, Outdoor Spectator Sports	2	2	2	2	3	3	3
Playgrounds, Neighborhood Parks	1	1	1	2	3	3	3
Golf Courses, Riding Stables, Water Recreation, Cemeteries	1	1	1	2	2	4	4
Office Buildings, Business Commercial, Retail Commercial and Professional	1	1	1	2	2	3	3
Industrial, Manufacturing, Utilities	1	1	1	1	2	2	2
Agriculture	1	1	1	1	1	1	1

Source: City of Victorville General Plan 2030 Noise Element Table N-3, 2011.

Notes:

CNEL = Community Noise Equivalent Level

(1) Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

(2) Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, with closed windows and fresh air supply systems or air conditioning will normally suffice.

(3) 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 insulation features included in the design.

(4) Clearly Unacceptable: New construction or development should generally not be undertaken.

Table 5
City of Victorville Base Ambient Noise Levels

Zone	Time	Sound Level Decibels
All residential zones	10:00 PM to 7:00 AM	55 dB(A)
	7:00 AM to 10:00 PM	65 dB(A)
All commercial zones	Anytime	70 dB(A)
All industrial zones	Anytime	75 dB(A)

Source: City of Victorville Municipal Code Section 13.01.040 and 13.01.050.

Notes:

(1) All ambient noise measurements shall commence in decibels within the respective zones and times as stated in the table above. If the ambient noise level exceeds the applicable limit, the ambient noise level shall be the standard.

(2) Noise levels shall not exceed the ambient noise levels in this table by the following dB(A) levels for the cumulative period of time specified:

- Less than 5 dB(A) for a cumulative period of more than thirty minutes in any hour;
- Less than 10 dB(A) for a cumulative period of more than fifteen minutes in any hour;
- Less than 15 dB(A) for a cumulative period of more than five minutes in any hour;
- Less than 20 dB(A) for a cumulative period of more than one minute in any hour;
- 20 dB(A) or more for any period of time.

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.

The equipment used to calculate the construction noise levels for each phase were based on the assumptions provided in the CalEEMod data prepared for the proposed project (Lilburn, 2025). 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.

Peak operational noise levels were modeled utilizing representative sound levels in the SoundPLAN model. Modeled noise sources include vehicle movement/parking lot activity, heavy equipment, sort line, heating and ventilation units (HVAC), and onsite driveway. The busiest hour associated with project operation was modeled utilizing representative sound levels in the SoundPLAN model. All noise sources were modeled to be in full operation for the entire hour.

On-Site Operational Equipment

Several pieces of heavy equipment are expected to be used onsite for project operations including an excavator (85 dBA at 33 feet), a bucket loader (82 dBA at 33 feet), a bobcat (80 dBA at 33 feet), and a roll off truck (85 dBA at 33 feet). The excavator will only be used inside of the building to load the hopper of the sort line. The bucket loader will primarily be used within the building to push material toward the excavator but may be used to move certain recovered items to outside bunkers. A roll off truck will be used to move full roll off boxes of recycled materials to the adjacent materials recovery facility and compost facility.

A sort line consisting of two screens and a conveyor belt with manual pick stations will be the primary noise source within the proposed building. This was modeled as an area source with a sound pressure level of 77 dBA at distance of 33 feet.

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 space, 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[1].

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 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 parking lot study:

$$L_w, ref = L_{w0} + K_{PA} + K_I + K_D + K_{StrO} + 10 \log(B) [dB(A)]$$

With the following parameters:

L_{w0} = Basic sound power, sound power level of one motion / per hour on P+R areas = 63 dB(A)
K_{PA} = Surcharge parking lot type
K_I = Surcharge for impulse character
K_D = 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
K_{StrO} = Surcharge for the road surface
B = Reference value

Mechanical Equipment (HVAC Units)

It is expected that the office building associated with the proposed project would include rooftop mounted heating, ventilation, and air conditioning (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[2]. 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 4 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. The roof top is assumed to be approximately 6 meters (~19.7 feet) above grade.

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.),

[1] SoundPLAN Essential 5.1 Manual. SoundPLAN GmbH. August 2020. https://www.aacacustica.com/galeria/soundplan/essential/Manual_SoundPLAN_Essential_5.1.pdf

[2] MD Acoustics, LLC Noise Measurement Data for RTU –Carrier 50TFQ0006 and car alarm.

- Roadway active width (distance between the center of the outermost 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,
- 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 E. Abbey Lane (Bimin Street) and Abbey Lane to access the project site. Existing average daily vehicle trips, project average daily vehicle trips, and project trip distribution were provided in the *Burrtec C&D Processing Facility Traffic Impact Analysis (TIA)* (Ganddini Group, Inc., December 31, 2024). Per the TIA, the project is anticipated to generate 158 net new proposed daily vehicle 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 people 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:

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

Where: PPV_{ref} = reference PPV at 25ft.
D_{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[2,3]	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-strautins/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[1]		Posted Travel Speeds (MPH)	Site Conditions
		Existing	Existing Plus Project		
E Abbey Lane (Bimin Street)	North of Abbey Lane	400	540	25	Hard
Abbey Lane	West of E Abbey Lane (Bimin Street)	200	300	25	Hard
	East of E Abbey Lane (Bimin Street)	700	870	25	Hard
	West of Stoddard Wells Road	700	1,390	25	Hard
Stoddard Wells Road	South of Abbey Lane	3,000	3,160	45	Hard

Vehicle Distribution (Heavy Mix)[2]				
Motor-Vehicle Type	Daytime % (7 AM-7 PM)	Evening % (7 PM-10 PM)	Night % (10 PM-7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

Vehicle Distribution (Light Mix)[2]				
Motor-Vehicle Type	Daytime % (7 AM-7 PM)	Evening % (7 PM-10 PM)	Night % (10 PM-7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

Notes:

(1) Existing and project average daily traffic volumes were obtained from the Burrtec C&D Processing Facility Traffic Impact Analysis, Ganddini Group Inc. (December 31, 2024).

(3) As neither the City of Victorville nor the County of San Bernardino have available vehicle percentage data for use in noise analyses, the 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

This section analyzes the significance of project-related noise and groundborne vibration impacts relative to standards established by the City of Victorville 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 Victorville can be categorized into the following areas:

- Construction Noise
- Operational Noise

Project Construction

On-Site Equipment

Construction noise is regulated within Section 13.01.060 of the City of Victorville Municipal Code (see Regulatory Setting section of this report). Accordingly, the project would result in a significant impact if:

- If project construction is determined by the director of building and safety to not be essential to the completion of the project. Otherwise, project construction activity is considered exempt from the provisions of the noise chapter of the City's Municipal Code.

Even though it is unlikely that the Director of Building and Safety is going to determine that project construction activities "are not essential", project construction noise levels were modeled in order to provide some perspective regarding how loud construction activities will be at adjacent land uses and to subsequently provide a list of reasonable BMPs to minimize these noise levels.

The City of Victorville does not establish a numeric maximum acceptable construction source noise level at potentially affected receivers during the daytime, which would allow for a quantified determination of what

CEQA consists as a "substantial temporary or periodic noise increase." Therefore, a numerical construction noise threshold based on the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts, as discussed below.

According to the FTA, local noise ordinances are typically not very useful in evaluating construction noise. They usually relate to nuisance and hours of allowed activity, and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the impact of a construction project. Project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Due to the lack of standardized construction daytime noise thresholds, the FTA provides guidelines that can be considered reasonable criteria for construction noise assessment. The FTA considers a daytime (7:00 AM to 10:00 PM) exterior construction noise level of 80 dBA L_{eq} for noise sensitive residential land uses and 85 dBA L_{eq} for commercial uses.

Accordingly, the project would result in a significant impact if:

- Project construction noise exceeds 80 dBA L_{eq} during the daytime (7:00 AM to 10:00 PM) at residential uses; or,
- Project construction noise exceeds 85 dBA L_{eq} during the daytime (7:00 AM to 10:00 PM) at commercial uses.

As stated previously, 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.

As shown in Table 9, modeled construction noise levels will range between 43.5 and 73.8 dBA L_{eq} at residential land uses located northeast and southeast of the project; 57.4 and 71.1 dBA L_{eq} at the park land use located east of the project; 47.2 and 75.9 dBA L_{eq} at church land uses located north and southeast of the project; 42.1 and 55.8 dBA L_{eq} at the transient lodging land use located southeast of the project; and 52.8 and 70.9 dBA L_{eq} at industrial land uses located east, west, and southwest of the project. Construction noise will not exceed the FTA daytime construction noise threshold for impacts to commercial land uses (85 dBA $L_{eq\ (8\text{-}hr)}$) or the FTA daytime construction noise threshold for impacts to residential land uses (80 dBA $L_{eq\ (8\text{-}hr)}$). As described above, the City of Victorville exempts noise associated with construction unless the Director of Building and Safety determines that the activity is not essential to complete the project. It is highly unlikely that this will occur. Therefore, the project would not exceed either City-established standards or FTA standards relating to construction noise. The project impact is less than significant; no mitigation is required.

Notwithstanding the above, BMPs provided in the Project Description can be added to project plans and in contract specifications to further minimize the already less than significant construction noise impacts.

Off-Site Vehicle Trips

Neither the City of Victorville's General Plan nor the City's Municipal Code establishes quantitative thresholds for the increase in ambient noise levels associated with project generated vehicle trips during project construction. According to the FHWA, traffic volumes would need to double in order to result in a barely perceptible increase in noise levels (3 dBA).[3]

Construction truck trips would occur throughout the construction period. Given the project site's location, it is anticipated that vendor and/or haul truck traffic would take the most direct route to Interstate 215 Freeway. The existing ADT along East Abbey Lane is 400 vehicles per day, along Abbey Lane is between

[3] Federal Highway Administration, Highway Noise Prediction Model, December 1978.

approximately 200 to 700 vehicles per day, and along Stoddard Wells Road is between 2,700 and 3,000 vehicles per day.[4] According to CalEEMod data prepared for the proposed project (Lilburn, 2025), the greatest number of construction-related vehicle trips per day would be up to approximately 139 vehicle trips per day during grading (15 for worker trips and 124 for hauling trips). Conservatively assuming all construction vehicle trips travel along each roadway, project construction would be anticipated to increase noise levels by up to approximately 1.3 dB along E Abbey Lane, between 0.79 to 2.29 dB along Abbey Lane, and between 0.19 to 0.22 dBA along Stoddard Wells Road (see Appendix D). Therefore, the addition of project vendor/haul trucks and worker vehicles per day along off-site roadway segments would not be anticipated to result in a doubling of traffic volumes necessary to increase noise levels by 3 dBA. Off-site project generated construction vehicle trips would result in a negligible noise level increase and would not result in a substantial increase in ambient noise levels. Impacts would be less than significant. No mitigation measures are required.

Project Operational Noise

Onsite Noise Sources

The project site is surrounded by properties zoned for light industrial use to the north, south, and west. Properties to the east are zoned light industrial and public-civic. Properties zoned for heavy industrial land uses are located approximately 205 feet west of the project site; properties zoned for high density mixed use are located as close as 525 feet to the east and properties zoned for single family land uses are located as close as 825 feet northeast of the project site.

Stationary noise source standards are established within Sections 13.01.040 and 13.01.050 of the City of Victorville Municipal Code (see Regulatory Setting section of this report). Accordingly, the project would result in a significant impact if:

Project operational noise exceeds the base ambient noise levels of 55 dBA (10:00 PM to 7:00 AM) and 65 dBA (7:00 AM to 10:00 PM) for all residential zones, 70 dBA for all commercial zones, and 75 dBA for all industrial zones for the cumulative period of time specified in Table 5. These standards are intended for field enforcement and were not intended to be used for modeling purposes. For the purposes of analysis, it is generally accepted that if the applicable $L_{eq(30\text{-}minute)}$ and L_{max} are not exceeded, other standards will not be exceeded. The applicable $L_{eq(30\text{-}minute)}$ standard is the applicable sound level decibel (depending on the zoning of the receiving property, see Table 5) plus 5 dB. The applicable L_{max} standard is the applicable sound level decibel shown in Table 5 plus 20 dB.

Given the explanation above, the applicable noise standards for the project are:

Zoning	Daytime L_{eq} (30-minute)	Nighttime L_{eq} (30 minute)	Daytime L_{max}	Nighttime L_{max}
Residential	70	60	85	75
Commercial	75	75	90	90
Industrial	80	80	95	95

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.

Based on the operational noise modeling, project operation is expected to range between 33 and 56 dBA L_{eq} at the property line of nearby parcels. As shown in Table 10, modeled project operational noise levels would be below the City's Municipal Code daytime and nighttime noise standards for residential and

[4] Existing average daily vehicle trips were obtained from Figure 12 of the Burrtec C&D Processing Facility Traffic Impact Analysis prepared by Ganddini Group, Inc. (December 31, 2024).

industrial uses (see also Figure 6 and Figure 7). Therefore, project operational noise impacts would be less than significant, and 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).

It is widely accepted that the average healthy human ear can barely perceive changes of 3 dBA in an outdoor environment and that a change of 5 dBA is readily perceptible.[5] Therefore, considering relevant case law, the project would result in a significant impact if:

- The addition of project trips on surrounding roadways causes noise levels to increase by:
  - 5 dBA where the existing ambient noise level is less than or equal to a CNEL of 60 dBA; or,
  - 3 dBA where the existing ambient noise level is a CNEL of 60 dBA to 65 dBA; or
  - 1.5 dBA where the existing ambient noise level is greater than or equal to a 65 dBA CNEL.

Roadway noise levels were calculated at roadways included in the *Burrtec C&D Processing Facility Traffic Impact Analysis* (Ganddini Group, Inc., December 31, 2024) based on the FHWA Traffic Noise Prediction Model methodology. During operation, the proposed project is expected to generate approximately 158 net new proposed daily vehicle trips. 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 49-67 dBA CNEL and the modeled Existing Plus Project traffic noise levels range between 51-67 dBA CNEL at the right-of-way of each study roadway segment.

As shown in Table 11, the addition of project trips is not expected to change noise levels in excess of the applicable increase threshold at any of the modeled 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

[5] California Department of Transportation's *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013)

In relation to the Environmental Checklist noise issue "b", the City of Victorville 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.

Existing structures in the immediate vicinity of the project site include the residential building located as close as approximately 58 feet to the southeast, the park buildings/structures located as close as approximately 325 feet to the east, the church buildings located as close as approximately 3,676 feet to the north, and the industrial buildings located as close as approximately 110, feet to the west, 337 feet to the east, and 444 fee to the southwest of the project site.

Groundborne vibration levels associated with project construction are provided in Table 12. 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 0.059 in/sec and use of a bulldozer is expected to generate a PPV of 0.025 in/sec at the closest off-site building, a residential structure located as close as approximately 58 feet southeast of the project site boundaries. 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 Southern California Logistics Airport (SCLA), with airport runways located as close as approximately 4.82 miles northwest of the project site. The City of Victorville Southern California Logistics Airport Specific Plan Exhibit 2.3, Long Range Noise Contours, shows that the

project site is well outside the 60 dBA CNEL noise contour for the SCLA.[6] Therefore, the proposed project would not expose people residing or working in the area to excessive noise levels. There is no impact, and no mitigation is required.

[6] Southern California Logistics Airport Specific Plan Review Draft, City of Victorville Development Department (February 2021). https://www.victorvilleca.gov/government/city-departments/development/planning/southern-california-logistics-airport-specific-plan

Table 9 (1 of 2)
Construction Noise Levels

Receptor Location	Construction Noise Levels (dBA Leq)
Demolition	
Church to North (Emmanuel Temple CME, 17288 Stoddard Wells Road, Victorville)	74.5
Residential to Northeast (117316 Jupiter Avenue, Victorville)	59.0
Residential to Northeast (Northgate Village Apartments, 17251 Dante Street, Victorville)	55.8
Park to East (Grady Trammel Park , 17184 Stoddard Wells Road, Victorville)	69.7
Industrial to East (AVCO/Victorville/Burrtec Industries, 17080 Stoddard Wells Road, Victorville)	69.5
Residential to Southeast (16992 Abbey Lane, Victorville)	72.4
Church to Southeast (Spirit of Christ Tabernacle, 17111 Stoddard Wells Road, Victorville)	59.5
Transient Lodging to Southeast (16959 Stoddard Wells Road, Victorville)	54.4
Industrial to West (Burrtec Waste, 17000 E Abbey Lane, Victorville)	68.8
Industrial to Southwest (16993 Abbey Lane, Victorville)	65.1
Site Preparation	
Church to North (Emmanuel Temple CME, 17288 Stoddard Wells Road, Victorville)	75.9
Residential to Northeast (117316 Jupiter Avenue, Victorville)	60.4
Residential to Northeast (Northgate Village Apartments, 17251 Dante Street, Victorville)	57.2
Park to East (Grady Trammel Park , 17184 Stoddard Wells Road, Victorville)	71.1
Industrial to East (AVCO/Victorville/Burrtec Industries, 17080 Stoddard Wells Road, Victorville)	70.9
Residential to Southeast (16992 Abbey Lane, Victorville)	73.8
Church to Southeast (Spirit of Christ Tabernacle, 17111 Stoddard Wells Road, Victorville)	60.9
Transient Lodging to Southeast (16959 Stoddard Wells Road, Victorville)	55.8
Industrial to West (Burrtec Waste, 17000 E Abbey Lane, Victorville)	70.2
Industrial to Southwest (16993 Abbey Lane, Victorville)	66.5
Grading	
Church to North (Emmanuel Temple CME, 17288 Stoddard Wells Road, Victorville)	75.5
Residential to Northeast (117316 Jupiter Avenue, Victorville)	60.0
Residential to Northeast (Northgate Village Apartments, 17251 Dante Street, Victorville)	56.8
Park to East (Grady Trammel Park , 17184 Stoddard Wells Road, Victorville)	70.7
Industrial to East (AVCO/Victorville/Burrtec Industries, 17080 Stoddard Wells Road, Victorville)	70.5
Residential to Southeast (16992 Abbey Lane, Victorville)	73.4
Church to Southeast (Spirit of Christ Tabernacle, 17111 Stoddard Wells Road, Victorville)	60.6
Transient Lodging to Southeast (16959 Stoddard Wells Road, Victorville)	55.4
Industrial to West (Burrtec Waste, 17000 E Abbey Lane, Victorville)	69.8
Industrial to Southwest (16993 Abbey Lane, Victorville)	66.1

Table 9 (2 of 2)
Construction Noise Levels

Receptor Location	Construction Noise Levels (dBA Leq)
Building Construction	
Church to North (Emmanuel Temple CME, 17288 Stoddard Wells Road, Victorville)	74.1
Residential to Northeast (117316 Jupiter Avenue, Victorville)	58.6
Residential to Northeast (Northgate Village Apartments, 17251 Dante Street, Victorville)	55.4
Park to East (Grady Trammel Park , 17184 Stoddard Wells Road, Victorville)	69.3
Industrial to East (AVCO/Victorville/Burrtec Industries, 17080 Stoddard Wells Road, Victorville)	69.1
Residential to Southeast (16992 Abbey Lane, Victorville)	72.1
Church to Southeast (Spirit of Christ Tabernacle, 17111 Stoddard Wells Road, Victorville)	59.2
Transient Lodging to Southeast (16959 Stoddard Wells Road, Victorville)	54.0
Industrial to West (Burrtec Waste, 17000 E Abbey Lane, Victorville)	68.4
Industrial to Southwest (16993 Abbey Lane, Victorville)	64.7
Paving	
Church to North (Emmanuel Temple CME, 17288 Stoddard Wells Road, Victorville)	66.6
Residential to Northeast (117316 Jupiter Avenue, Victorville)	51.1
Residential to Northeast (Northgate Village Apartments, 17251 Dante Street, Victorville)	47.9
Park to East (Grady Trammel Park , 17184 Stoddard Wells Road, Victorville)	61.8
Industrial to East (AVCO/Victorville/Burrtec Industries, 17080 Stoddard Wells Road, Victorville)	61.6
Residential to Southeast (16992 Abbey Lane, Victorville)	64.5
Church to Southeast (Spirit of Christ Tabernacle, 17111 Stoddard Wells Road, Victorville)	51.7
Transient Lodging to Southeast (16959 Stoddard Wells Road, Victorville)	46.5
Industrial to West (Burrtec Waste, 17000 E Abbey Lane, Victorville)	60.9
Industrial to Southwest (16993 Abbey Lane, Victorville)	57.2
Architectural Coating	
Church to North (Emmanuel Temple CME, 17288 Stoddard Wells Road, Victorville)	62.2
Residential to Northeast (117316 Jupiter Avenue, Victorville)	46.7
Residential to Northeast (Northgate Village Apartments, 17251 Dante Street, Victorville)	43.5
Park to East (Grady Trammel Park , 17184 Stoddard Wells Road, Victorville)	57.4
Industrial to East (AVCO/Victorville/Burrtec Industries, 17080 Stoddard Wells Road, Victorville)	57.2
Residential to Southeast (16992 Abbey Lane, Victorville)	60.1
Church to Southeast (Spirit of Christ Tabernacle, 17111 Stoddard Wells Road, Victorville)	47.2
Transient Lodging to Southeast (16959 Stoddard Wells Road, Victorville)	42.1
Industrial to West (Burrtec Waste, 17000 E Abbey Lane, Victorville)	56.5
Industrial to Southwest (16993 Abbey Lane, Victorville)	52.8

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

Table 10
Analysis of Project Operational Noise Levels

Receptor Location[1]	Zoning Designation[2]	Existing Land Use	Applicable Standards (dBA, Leq)[3]		Modeled Operational Noise Levels (dBA Leq)	Exceeds Standards?[3]
			Day	Night		
1	MU-2	Church	70	60	39	No
2	MU-2	Hotel	70	60	33	No
3	M-1	Church	80	80	38	No
4	MU-2	Multiple Family Residential	70	60	34	No
5	M-1	Single Family Residential	80	80	56	No
6	P-C	Park	n/a	n/a	49	No
7	M-1	Vacant	80	80	36	No
8	M-2	Material Recycling	80	80	44	No
9	M-1	Vacant	80	80	51	No

Notes:

(1) See Figures 6 and 7 for receptor locations.

(2) Zoning: P-C = Public Civic, MU-2 = High Density Mixed Use, M-1= Light Industrial, M-2 = Heavy Industrial. As MU-2 allows for residential use, the residential standards were utilized for this zoning designation.

(3) Per City of Victorville Municipal Code Section 13.01.040, residential 55 dBA (10:00 PM to 7:00 AM) and 65 dBA (7:00 AM to 10:00 PM), commercial 70 dBA anytime, and industrial 75 dBA anytime. The applicable Leq(30-minute) standard is the applicable sound level decibel (depending on the zoning of the receiving property) plus 5 dB (see Table 5).

Table 11
Increase in Existing Noise Levels Due to Project Generated Vehicle Traffic

Roadway	Segment	Distance from roadway centerline to ROW (feet)[1]	Modeled Noise Levels (dBA CNEL)[2]				
			Existing Without Project	Existing Plus Project	Change in Noise Level	Applicable Increase Threshold[3]	Exceeds Threshold?
E Abbey Lane (Bimin Street)	North of Abbey Lane	30	52.34	53.64	1.30	5	No
Abbey Lane	West of E Abbey Lane (Bimin Street)	30	49.33	51.09	1.76	5	No
	East of E Abbey Lane (Bimin Street)	30	54.77	55.71	0.94	5	No
	West of Stoddard Wells Road	30	54.77	57.75	2.98	5	No
Stoddard Wells Road	South of Abbey Lane	64	66.61	66.83	0.22	1.5	No

Notes:

(1) Right of way per the City of Victorville General Plan Circulation Element.

(2) Exterior noise levels calculated 5 feet above pad elevation, perpendicular to subject roadway.

(3) The addition of project trips on surrounding roadways is considered significant if it causes noise levels to increase by: 5 dBA where the existing ambient noise level is less than or equal to a CNEL of 60 dBA; 3 dBA where the existing ambient noise level is a CNEL of 60 dBA to 65 dBA; or 1.5 dBA where the existing ambient noise level is greater than or equal to a 65 dBA CNEL.

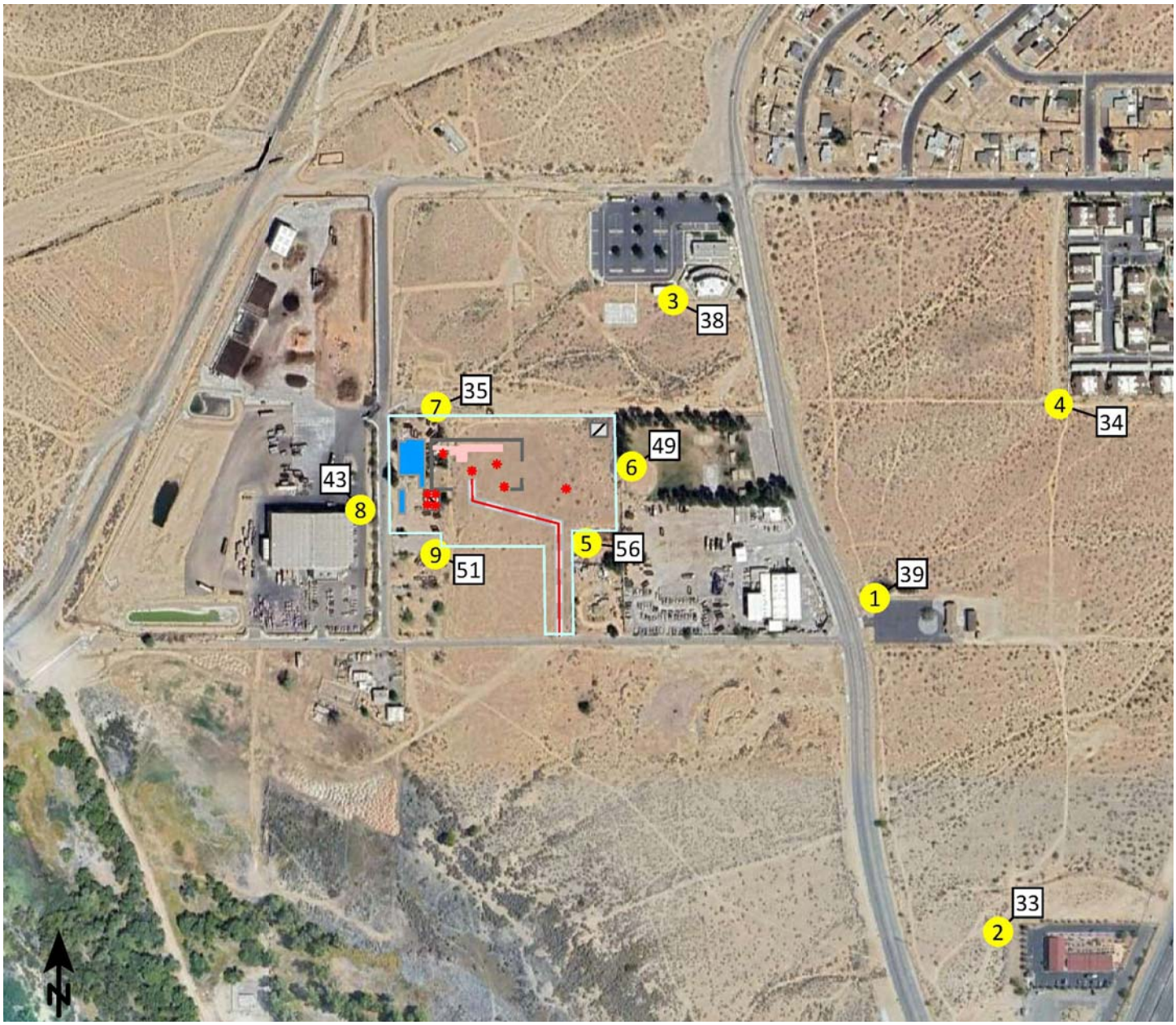
Table 12
Construction Vibration Levels at the Nearest Receptors

Receptor Location	Distance from Property Line to Nearest Structure (feet)	Equipment	Vibration Level[1]	Threshold Exceeded?[2]
Architectural Damage Analysis				
Residential to Southeast (Zoned M-1, Light Industrial) (16992 Abbey Lane, Victorville)	58	Vibratory Roller	0.059	No
	58	Large Bulldozer	0.025	No
Industrial to East (AVCO/Victorville/Burrtec Industries, 17080 Stoddard Wells Road, Victorville)	337	Vibratory Roller	0.004	No
	337	Large Bulldozer	0.002	No
Park to East (Grady Trammel Park , 17184 Stoddard Wells Road, Victorville)	325	Vibratory Roller	0.004	No
	325	Large Bulldozer	0.002	No
Church to North (Emmanuel Temple CME, 17288 Stoddard Wells Road, Victorville)	367	Vibratory Roller	0.004	No
	367	Large Bulldozer	0.002	No
Industrial to West (Burrtec Waste, 17000 E Abbey Lane, Victorville)	110	Vibratory Roller	0.023	No
	110	Large Bulldozer	0.010	No
Industrial to Southwest (16993 Abbey Lane, Victorville)	444	Vibratory Roller	0.003	No
	444	Large Bulldozer	0.001	No

Notes:

(1) Vibration levels are provided in PPV in/sec for architectural damage.

(2) Caltrans identifies the threshold at which there is a risk to "architectural" damage to older residential structures as 0.3 in/sec PPV and to modern industrial/commercial buildings as 0.5 in/sec PPV (see Table 3).



Signs and symbols

- Project Site
- Main building
- Receiver
- Drive
- Heavy Equipment and HVAC
- Conveyance System
- Parking lot
- Noise Level Tables (dBA, Leq)

Figure 6
Operational Noise Levels (dBA Leq)



Figure 7
Operational Noise Contours (dBA Leq)

7. REFERENCES

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APPENDICES

Appendix A List of Acronyms
Appendix B Glossary
Appendix C Noise Measurement Field Worksheets
Appendix D Construction Noise Modeling
Appendix E SoundPLAN Input and Output
Appendix F FHWA Worksheets
Appendix G 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 L_{eq}	Average Noise Level over a Period of Time
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
L_{02},L_{08},L_{50},L_{90}	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
$L_{eq(x)}$	Equivalent Noise Level for '"x" period of time
L_{eq}	Equivalent Noise Level
L_{max}	Maximum Level of Noise (measured using a sound level meter)
L_{min}	Minimum Level of Noise (measured using a sound level meter)
Lp	Sound pressure level
LOS C	Level of Service C
Lw	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}	Lmax 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. Lmin 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: Burrtec C&D Processing Facility, City of Victorville **Date:** August 15, 2024

Project #: 19739

Noise Measurement #: STNM1 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 16901 Stoddard Wells Road, Victorville, 92394

Site Description (Type of Existing Land Use and any other notable features): Measurement Site: Taken near the entry/exit way to hotel parking lot. Adjacent: Stoddard Wells Rd (running NW-SE) adjacent to west w/ vacant land further west, hotel to southeast w/ associated parking areas, driveway to northeast for what looks like residential further northeast, & 15 Fwy (running NE-SW) ~500' east. Gas station, hotels & one residential like building in immediate area.

Weather: <5% cloud, sunshine. Sunset 7:36 PM **Settings:** SLOW FAST

Temperature: 86 deg F **Wind:** 6 mph **Humidity:** 20% **Terrain:** Flat

Start Time: 11:16 AM **End Time:** 11:31 AM **Run Time:**

Leq:	69.3	dB
Lmax	84.6	dB
L2	78.6	dB
L8	74.3	dB
L25	67.0	dB
L50	58.5	dB

Primary Noise Source: Traffic noise from the 59 vehicles passing STNM1 microphone traveling along Stoddard Wells Road (running NW-SE) just W of STNM1.

Secondary Noise Sources: Traffic ambiance from the 15 Fwy (~500' E of STNM1). Noise from occasional air traffic, hotel parking lot noise, hotel air conditioning. Some bird noise, ravens.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CAL 250
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CAL 250
SERIAL NUMBER:	3099	**SERIAL NUMBER:**	2723
FACTORY CALIBRATION DATE:	7/31/2024	**FACTORY CALIBRATION DATE:**	10/7/2024
FIELD CALIBRATION DATE:	8/15/2024		

Noise Measurement
Field Data

PHOTOS:



STNM1 looking NNW along Stoddard Wells Road, across entry/exit way to what looks like multifamily residence building 16959 Stoddard Wells Road, Victorville.



STNM1 looking ESE across parking lot towards hotel building 16901 Stoddard Wells Road, Victorville.

Summary				
File Name on Meter	LxT_Data.418.s			
File Name on PC	LxT_0003099-20240815 111640-LxT_Data.418.ldbin			
Serial Number	3099			
Model	SoundTrack LxT®			
Firmware Version	2.404			
User	Ian Edward Gallagher			
Location	STNM1 34°33'26.70"N 117°17'22.31"W			
Job Description	15 minute noise measurement			
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville			
Measurement				
Start	2024-08-15 11:16:40			
Stop	2024-08-15 11:31:40			
Duration	00:15:00.0			
Run Time	00:15:00.0			
Pause	00:00:00.0			
Pre-Calibration	2024-08-15 11:16:15			
Post-Calibration	None			
Calibration Deviation	---			
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	122.3 dB			
Results				
LA_{eq}	69.3			
LAE	98.8			
EA	842.4381 µPa²h			
EA8	26.95802 mPa²h			
EA40	134.7901 mPa²h			
$LA_{peak\ (max)}$	2024-08-15 11:27:56	100.6 dB		
LAS_{max}	2024-08-15 11:27:56	84.6 dB		
LAS_{min}	2024-08-15 11:21:10	49.7 dB		
			Statistics	
LC_{eq}	77.3 dB		**LA2.00**	78.6 dB
LA_{eq}	69.3 dB		**LA8.00**	74.3 dB
LC_{eq} - LA_{eq}	8.1 dB		**LA25.00**	67.0 dB
LAI_{eq}	71.3 dB		**LA50.00**	58.5 dB
LA_{eq}	69.3 dB		**LA66.60**	55.7 dB
LAI_{eq} - LA_{eq}	2.1 dB		**LA90.00**	52.7 dB
Overload Count	0			
Overload Duration	0.0 s			

Measurement Report

Report Summary

Meter's File Name	LxT_Data.418.s	Computer's File Name	LxT_0003099-20240815 111640-LxT_Data.418.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM1 34°33'26.70"N 117°17'22.31"W
Job Description	15 minute noise measurement		
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville		
Start Time	2024-08-15 11:16:40	Duration	0:15:00.0
End Time	2024-08-15 11:31:40	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	69.3 dB		
LAE	98.8 dB	SEA	--- dB
EA	842.4 µPa²h	LAFTM5	74.5 dB
EA8	27.0 mPa²h		
EA40	134.8 mPa²h		
LA_{peak}	100.6 dB	2024-08-15 11:27:56	
LAS_{max}	84.6 dB	2024-08-15 11:27:56	
LAS_{min}	49.7 dB	2024-08-15 11:21:10	
LA_{eq}	69.3 dB		
LC_{eq}	77.3 dB	LC_{eq} - LA_{eq}	8.1 dB
LAI_{eq}	71.3 dB	LAI_{eq} - LA_{eq}	2.1 dB

Exceedances	Count	Duration
LAS > 65.0 dB	30	0:04:57.9
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 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

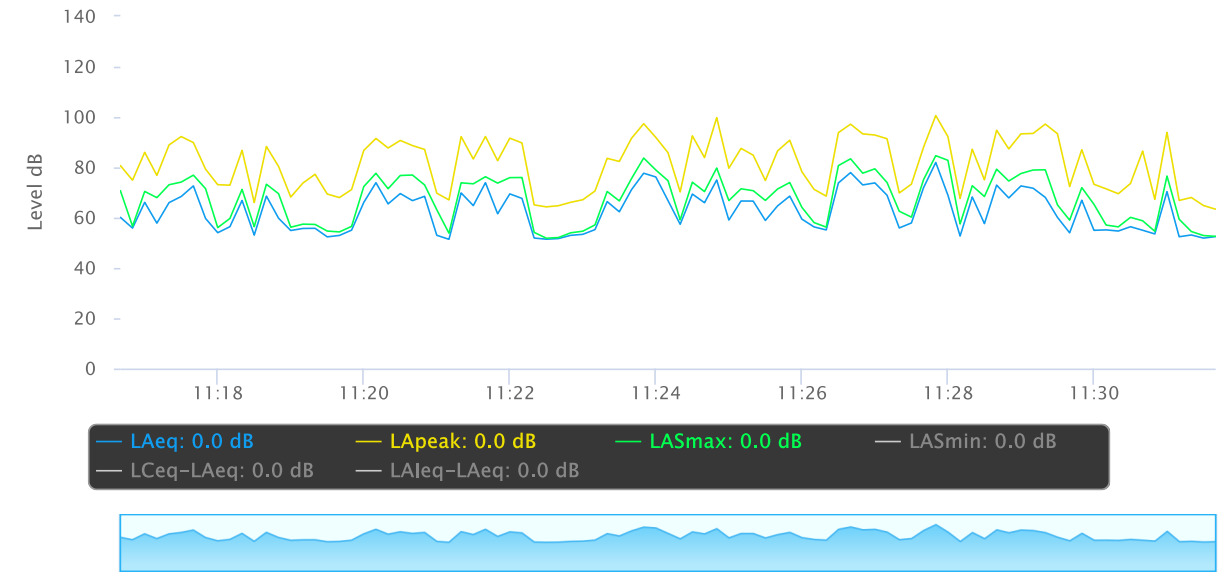
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	69.3 dB		77.3 dB		--- dB	
$L_{S(max)}$	84.6 dB	2024-08-15 11:27:56	--- dB		--- dB	
$L_{S(min)}$	49.7 dB	2024-08-15 11:21:10	--- dB		--- dB	
$L_{Peak(max)}$	100.6 dB	2024-08-15 11:27:56	--- dB		--- dB	

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

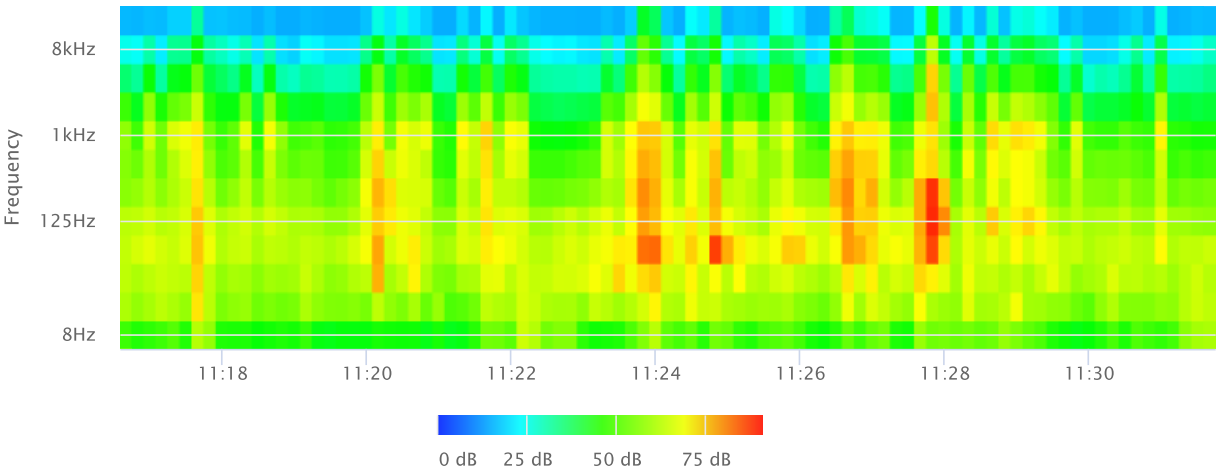
Statistics

LAS 2.0	78.6 dB
LAS 8.0	74.3 dB
LAS 25.0	67.0 dB
LAS 50.0	58.5 dB
LAS 66.6	55.7 dB
LAS 90.0	52.7 dB

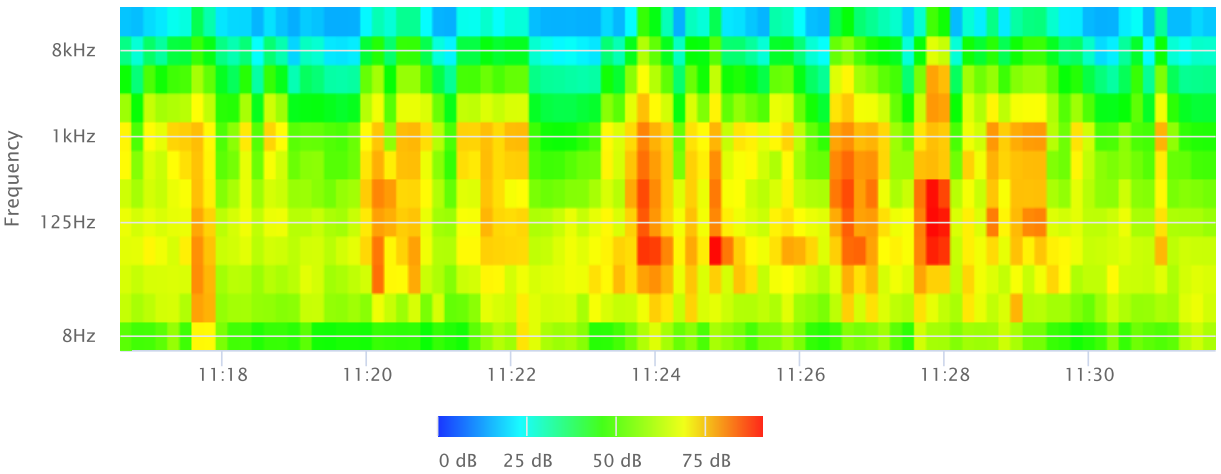
Time History



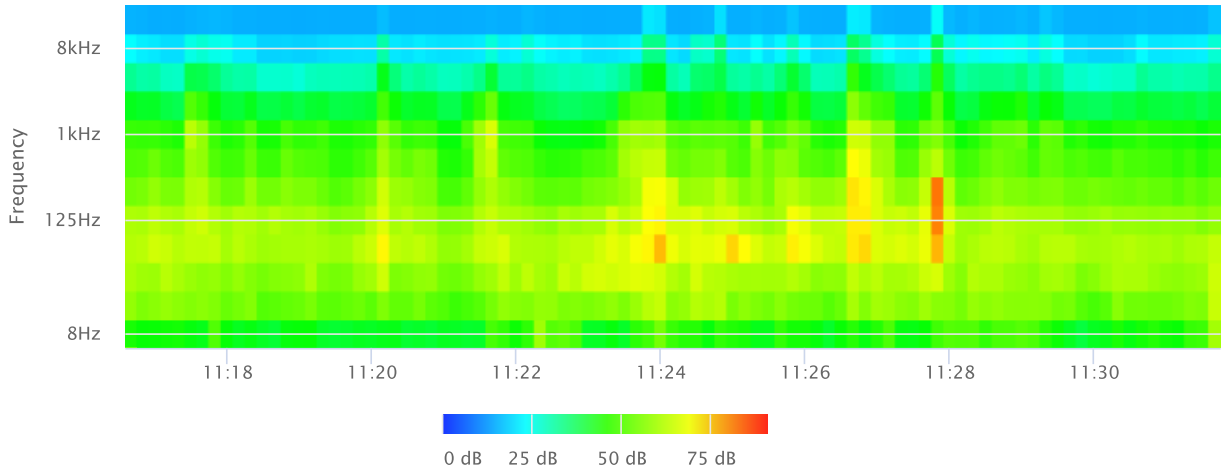
OBA 1/1 Leq



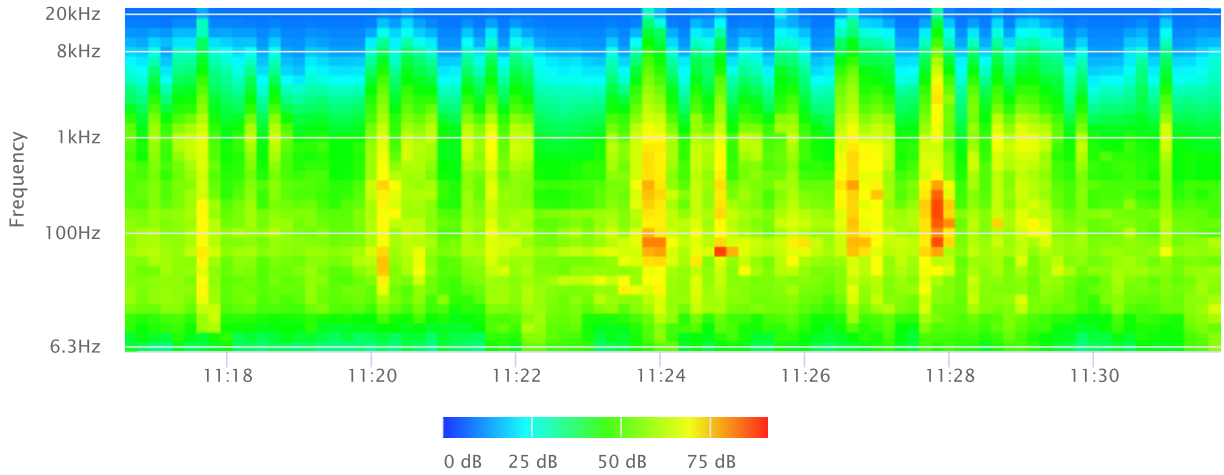
OBA 1/1 Lmax



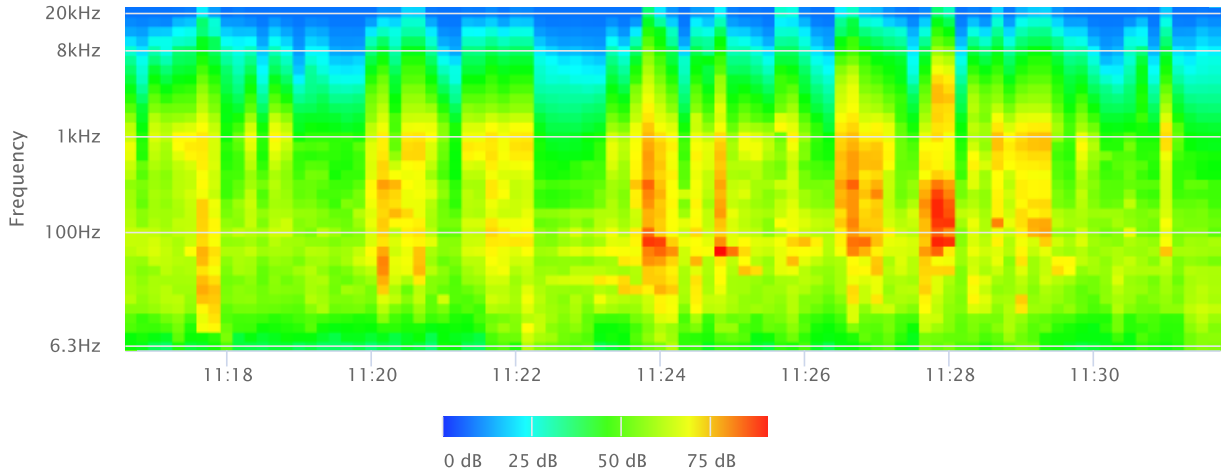
OBA 1/1 Lmin



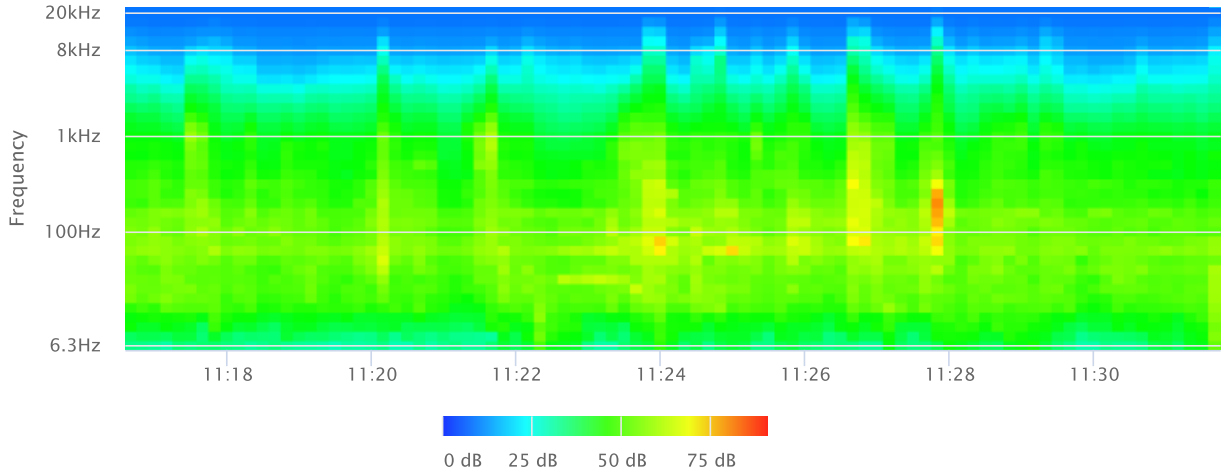
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
11:18
11:20
11:22
11:24
11:26
11:28
11:30
0 dB
25 dB
50 dB
75 dB

Noise Measurement
Field Data

Project Name: Burrtec C&D Processing Facility, City of Victorville **Date:** August 15, 2024

Project #: 19739

Noise Measurement #: STNM2 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 17111 Stoddard Wells Road, Victorville, 92394

Site Description (Type of Existing Land Use and any other notable features): Measurement Site: Taken near entry/exit way to church parking lot.
Adjacent: Stoddard Wells Rd (running NNW-SSE) adjacent to west with commerical uses further west, church use and associated parking to east, vacant land surrouding in all other areas, & 15 Fwy (running NE-SW) ~1,300' E . B

Weather: <5% cloud, sunshine. Sunset 7:36 PM **Settings:** SLOW FAST

Temperature: 86 deg F **Wind:** 6 mph **Humidity:** 20% **Terrain:** Flat

Start Time: 11:50 AM **End Time:** 12:05 PM **Run Time:**

Leq:	67.4	dB
Lmax	89.2	dB
L2	75.7	dB
L8	71.7	dB
L25	66.2	dB
L50	58.2	dB

Primary Noise Source: Traffic noise from the 53 vehicles passing STNM2 microphone traveling along Stoddard Wells Road (running NNW-SSE) just W of STNM2.

Secondary Noise Sources: Traffic ambiance from the 15 Fwy (~1,300' E of STNM2). Noise from occasional air traffic. Some bird noise, ravens. Loose steel plate over road work trench in road.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CAL 250
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CAL 250
SERIAL NUMBER:	3099	**SERIAL NUMBER:**	2723
FACTORY CALIBRATION DATE:	7/31/2024	**FACTORY CALIBRATION DATE:**	10/7/2024
FIELD CALIBRATION DATE:	8/15/2024		

Noise Measurement
Field Data

PHOTOS:



STNM2 looking NNW across exit/entry way to asphalt parking lot to church building 17111 Stoddard Wells Road, Victorville.



STNM2 looking E across asphalt parking lot towards building 17111 Stoddard Wells Road, Victorville (~225' E). 15 Fwy (running NE -SW) behind building (~1,300' E of STNM2).

Summary	
File Name on Meter	LxT_Data.419.s
File Name on PC	LxT_0003099-20240815 115052-LxT_Data.419.ldbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM2 34°33'39.43"N 117°17'25.18"W
Job Description	15 minute noise measurement
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville

Measurement	
Start	2024-08-15 11:50:52
Stop	2024-08-15 12:05:52
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2024-08-15 11:50:12
Post-Calibration	None
Calibration Deviation	---

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	122.5 dB

Results				
LA_{eq}	67.4			
LAE	97.0			
EA	555.4246	µPa²h		
EA8	17.77359	mPa²h		
EA40	88.86794	mPa²h		
$LA_{peak\ (max)}$	2024-08-15 11:58:32	109.2	dB	
LAS_{max}	2024-08-15 11:58:33	89.2	dB	
LAS_{min}	2024-08-15 12:01:11	46.2	dB	

			Statistics	
LC_{eq}	75.9 dB		**LA2.00**	75.7 dB
LA_{eq}	67.4 dB		**LA8.00**	71.7 dB
LC_{eq} - LA_{eq}	8.5 dB		**LA25.00**	66.2 dB
LAI_{eq}	72.5 dB		**LA50.00**	58.2 dB
LA_{eq}	67.4 dB		**LA66.60**	54.1 dB
LAI_{eq} - LA_{eq}	5.0 dB		**LA90.00**	49.5 dB
Overload Count	0			
Overload Duration	0.0 s			

Measurement Report

Report Summary

Meter's File Name	LxT_Data.419.s	Computer's File Name	LxT_0003099-20240815 115052-LxT_Data.419.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM2 34°33'39.43"N 117°17'25.18"W
Job Description	15 minute noise measurement		
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville		
Start Time	2024-08-15 11:50:52	Duration	0:15:00.0
End Time	2024-08-15 12:05:52	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	67.4 dB		
LAE	97.0 dB	SEA	--- dB
EA	555.4 µPa²h	LAFTM5	74.7 dB
EA8	17.8 mPa²h		
EA40	88.9 mPa²h		
LA_{peak}	109.2 dB	2024-08-15 11:58:32	
LAS_{max}	89.2 dB	2024-08-15 11:58:33	
LAS_{min}	46.2 dB	2024-08-15 12:01:11	
LA_{eq}	67.4 dB		
LC_{eq}	75.9 dB	LC_{eq} - LA_{eq}	8.5 dB
LAI_{eq}	72.5 dB	LAI_{eq} - LA_{eq}	5.0 dB

Exceedances	Count	Duration
LAS > 65.0 dB	32	0:04:58.4
LAS > 85.0 dB	1	0:00:02.3
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 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

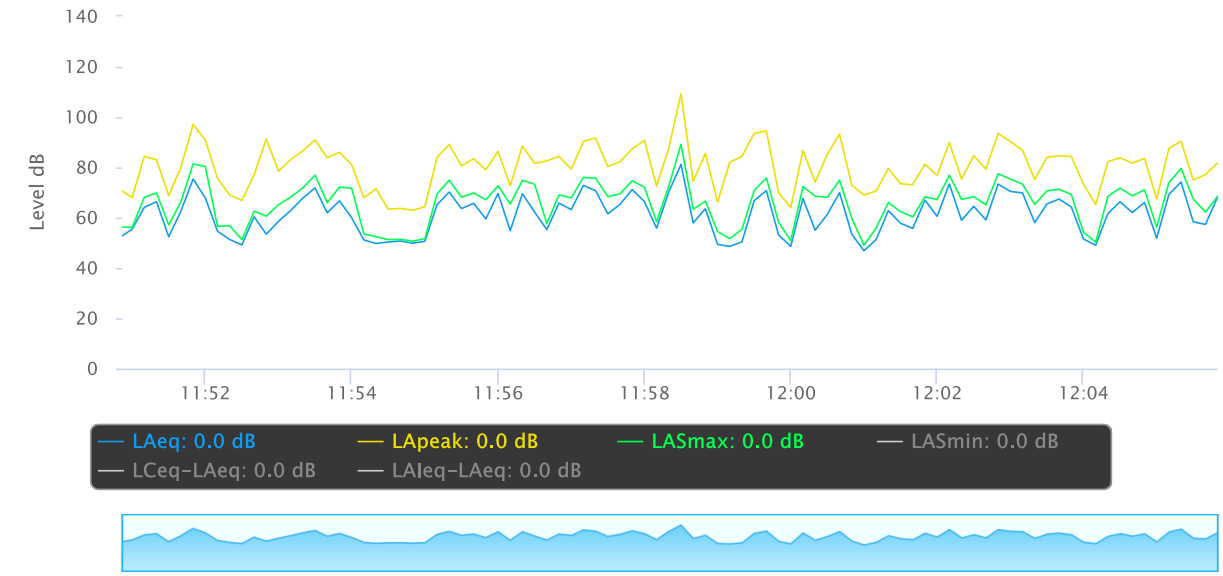
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	67.4 dB		75.9 dB		--- dB	
$L_{S(max)}$	89.2 dB	2024-08-15 11:58:33	--- dB		--- dB	
$L_{S(min)}$	46.2 dB	2024-08-15 12:01:11	--- dB		--- dB	
$L_{Peak(max)}$	109.2 dB	2024-08-15 11:58:32	--- dB		--- dB	

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

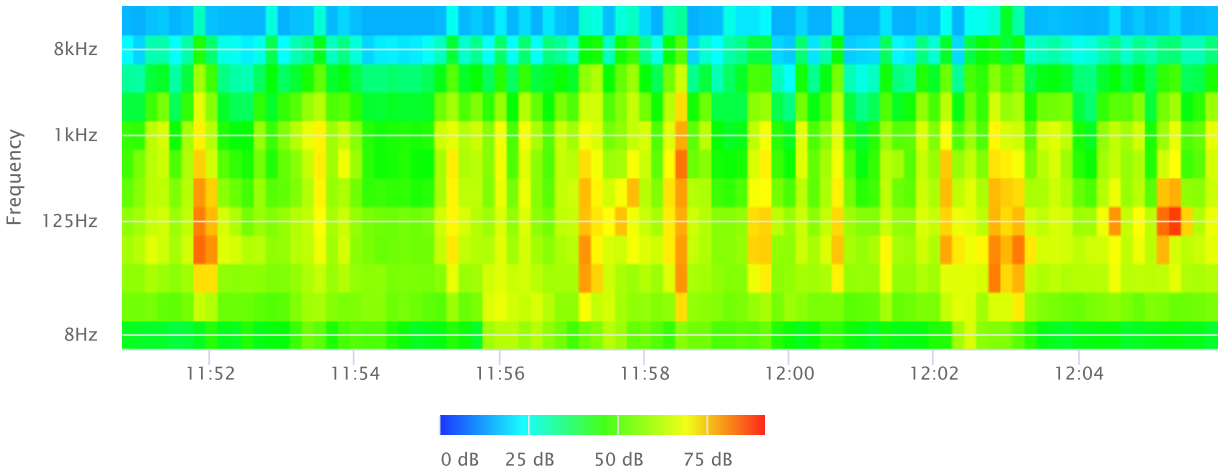
Statistics

LAS 2.0	75.7 dB
LAS 8.0	71.7 dB
LAS 25.0	66.2 dB
LAS 50.0	58.2 dB
LAS 66.6	54.1 dB
LAS 90.0	49.5 dB

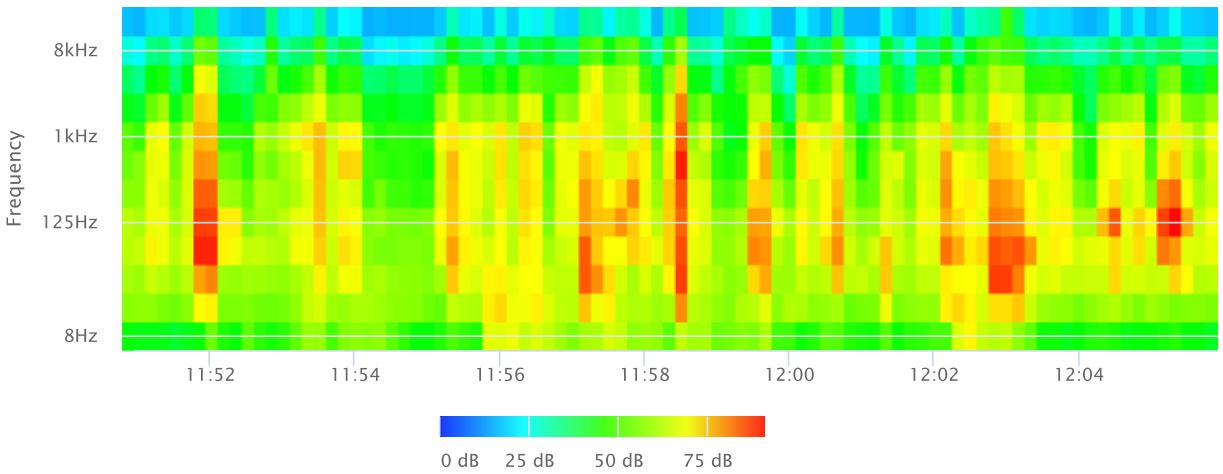
Time History



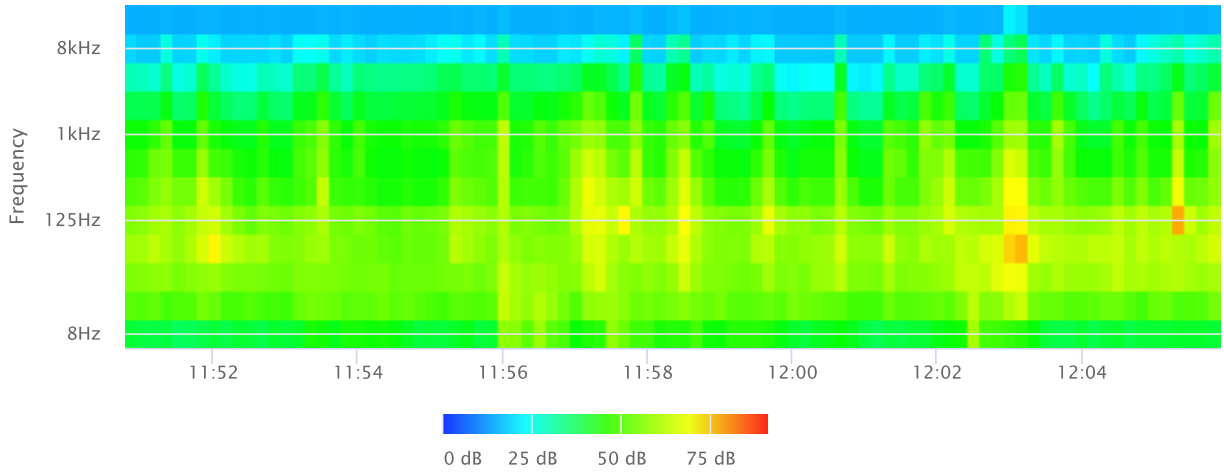
OBA 1/1 Leq



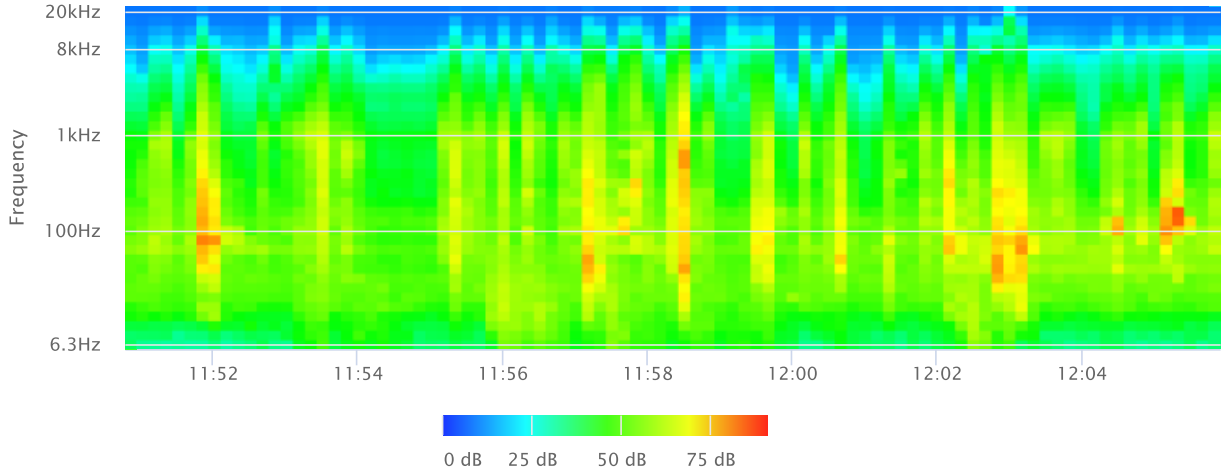
OBA 1/1 Lmax



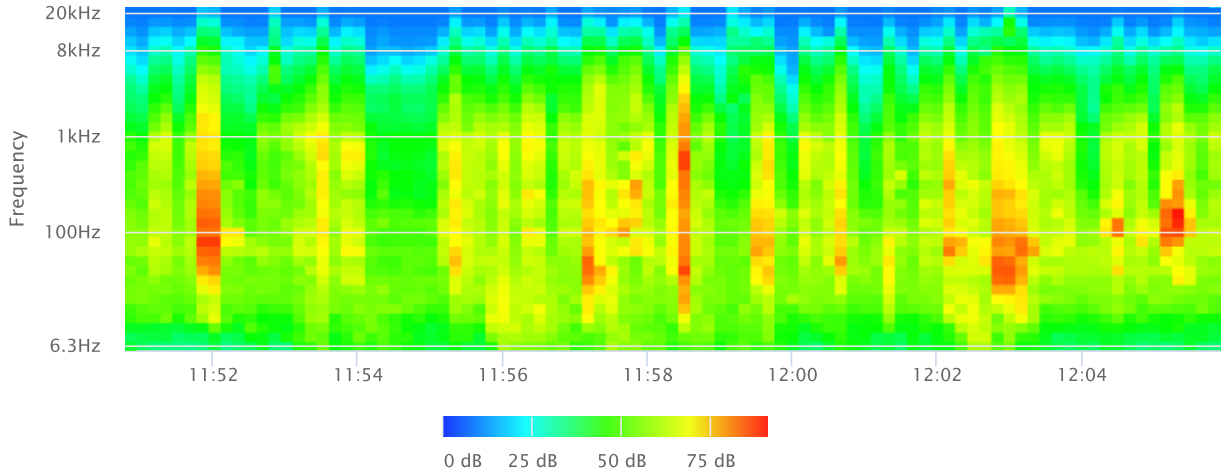
OBA 1/1 Lmin



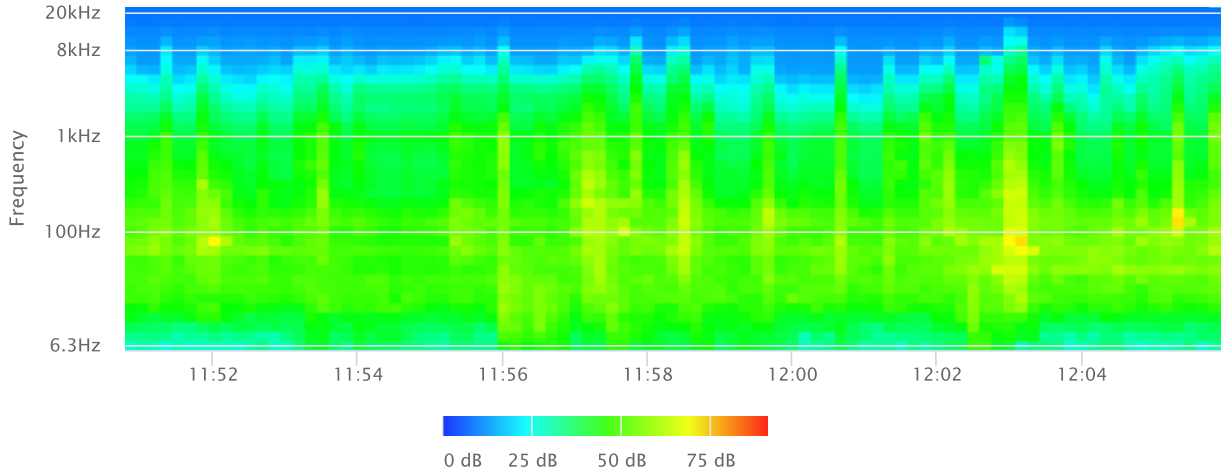
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
11:52
11:54
11:56
11:58
12:00
12:02
12:04
0 dB
25 dB
50 dB
75 dB

Noise Measurement
Field Data

Project Name: Burrtec C&D Processing Facility, City of Victorville **Date:** August 15, 2024

Project #: 19739

Noise Measurement #: STNM3 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 17288 Stoddard Wells Road, Victorville, 92394

Site Description (Type of Existing Land Use and any other notable features): Measurement Site: Taken within western sidewalk of Stoddard Wells Rd just southeast of the church use. Adjacent: Stoddard Wells Rd (running NNW-SSE) adjacent to east with vacant land further east, church use adjacent to northwest with vacant land to southwest, & 15 Fwy (running NE-SW) ~2,200'east.

Weather: <5% cloud, sunshine. Sunset 7:36 PM **Settings:** SLOW FAST

Temperature: 86 deg F **Wind:** 6 mph **Humidity:** 20% **Terrain:** Flat

Start Time: 12:54 PM **End Time:** 1:09 PM **Run Time:**

Leq:	67.8	dB
Lmax	84.4	dB
L2	78.8	dB
L8	72.6	dB
L25	62.8	dB
L50	51.5	dB

Primary Noise Source: Traffic noise from the 49 vehicles passing STNM3 microphone traveling along Stoddard Wells Road (running NNW-SSE) just E of STNM3.

Secondary Noise Sources: Traffic ambiance from the 15 Fwy (~2,200' E of STNM3). Noise from occasional air traffic. Some bird noise, ravens.

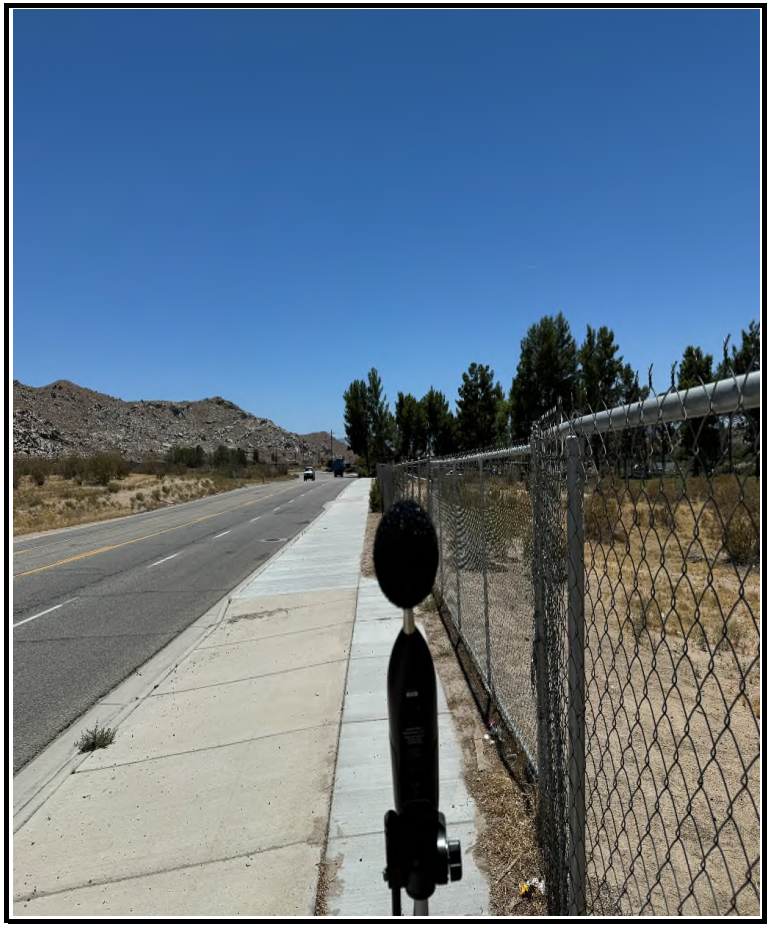
NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CAL 250
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CAL 250
SERIAL NUMBER:	3099	**SERIAL NUMBER:**	2723
FACTORY CALIBRATION DATE:	7/31/2024	**FACTORY CALIBRATION DATE:**	10/7/2024
FIELD CALIBRATION DATE:	8/15/2024		

Noise Measurement
Field Data

PHOTOS:



STNM3 looking N up Stoddard Wells Road, church building 17288 Stoddard Wells Road on left of image.



STNM3 looking S down Stoddard Wells Road.

Summary	
File Name on Meter	LxT_Data.420.s
File Name on PC	LxT_0003099-20240815 125425-LxT_Data.420.ldbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM3 34°33'48.89"N 117°17'29.58"W
Job Description	15 minute noise measurement
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville

Measurement	
Start	2024-08-15 12:54:25
Stop	2024-08-15 13:09:25
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2024-08-15 12:54:08
Post-Calibration	None
Calibration Deviation	---

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			
LA_{eq}	67.8		
LAE	97.4		
EA	604.85	µPa²h	
EA8	19.3552	mPa²h	
EA40	96.77599	mPa²h	
$LA_{peak\ (max)}$	2024-08-15 13:05:54	100.0	dB
LAS_{max}	2024-08-15 13:02:38	84.4	dB
LAS_{min}	2024-08-15 13:07:40	44.8	dB

			Statistics		
LC_{eq}	74.7	dB	**LA2.00**	78.8	dB
LA_{eq}	67.8	dB	**LA8.00**	72.6	dB
LC_{eq} - LA_{eq}	6.9	dB	**LA25.00**	62.8	dB
LAI_{eq}	70.6	dB	**LA50.00**	51.5	dB
LA_{eq}	67.8	dB	**LA66.60**	49.0	dB
LAI_{eq} - LA_{eq}	2.8	dB	**LA90.00**	46.7	dB
Overload Count	0				
Overload Duration	0.0	s			

Measurement Report

Report Summary

Meter's File Name	LxT_Data.420.s	Computer's File Name	LxT_0003099-20240815 125425-LxT_Data.420.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM3 34°33'48.89"N 117°17'29.58"W
Job Description	15 minute noise measurement		
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville		
Start Time	2024-08-15 12:54:25	Duration	0:15:00.0
End Time	2024-08-15 13:09:25	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	67.8 dB		
LAE	97.4 dB	SEA	--- dB
EA	604.8 µPa²h	LAFTM5	74.2 dB
EA8	19.4 mPa²h		
EA40	96.8 mPa²h		
LA_{peak}	100.0 dB	2024-08-15 13:05:54	
LAS_{max}	84.4 dB	2024-08-15 13:02:38	
LAS_{min}	44.8 dB	2024-08-15 13:07:40	
LA_{eq}	67.8 dB		
LC_{eq}	74.7 dB	LC_{eq} - LA_{eq}	6.9 dB
LAI_{eq}	70.6 dB	LAI_{eq} - LA_{eq}	2.8 dB

Exceedances	Count	Duration
LAS > 65.0 dB	27	0:03:27.7
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 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

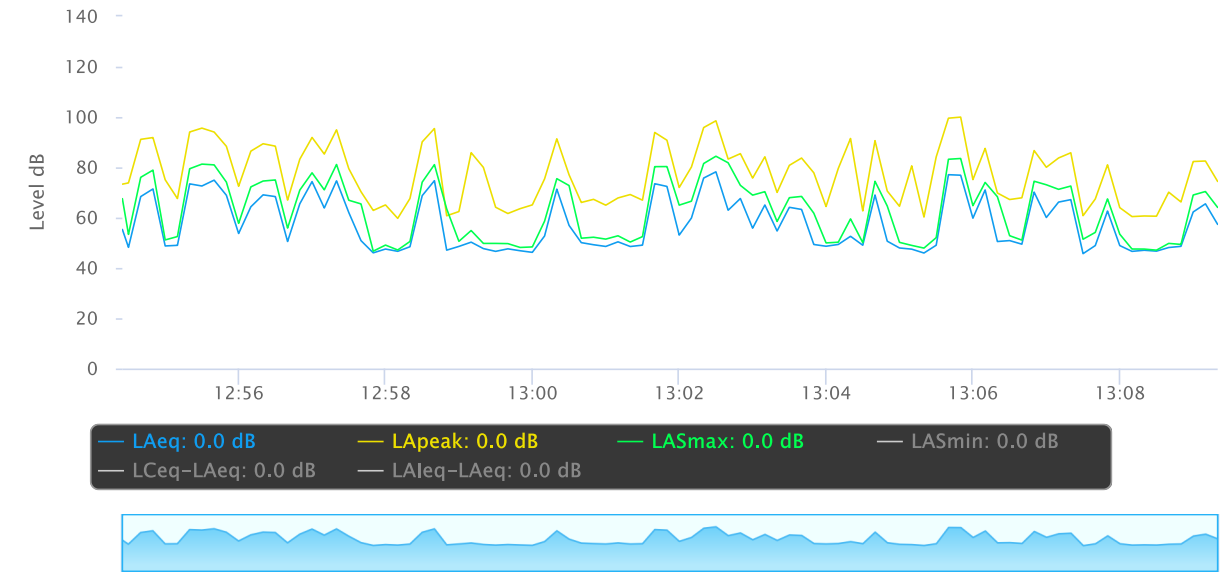
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	67.8 dB		74.7 dB		--- dB	
$L_{S(max)}$	84.4 dB	2024-08-15 13:02:38	--- dB		--- dB	
$L_{S(min)}$	44.8 dB	2024-08-15 13:07:40	--- dB		--- dB	
$L_{Peak(max)}$	100.0 dB	2024-08-15 13:05:54	--- dB		--- dB	

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

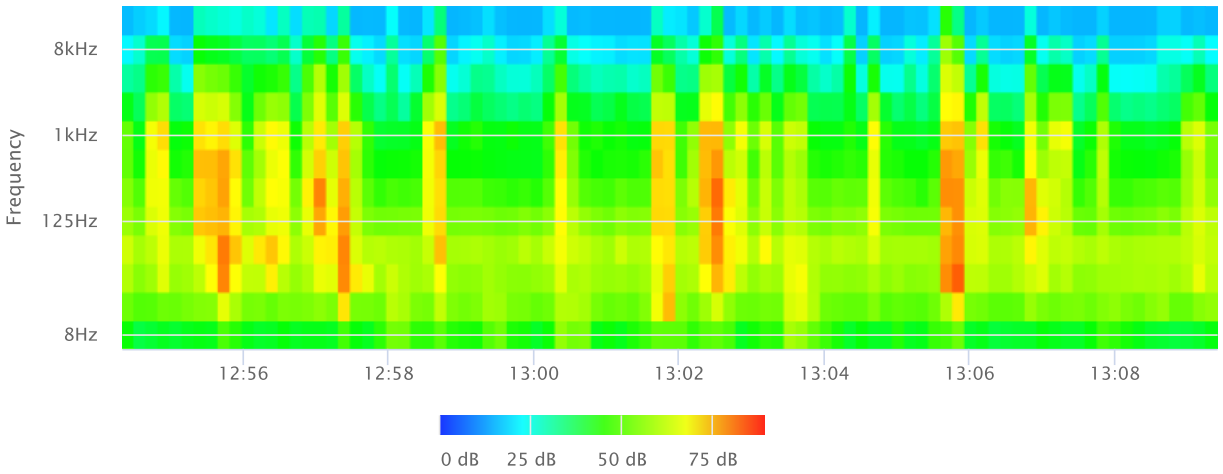
Statistics

LAS 2.0	78.8 dB
LAS 8.0	72.6 dB
LAS 25.0	62.8 dB
LAS 50.0	51.5 dB
LAS 66.6	49.0 dB
LAS 90.0	46.7 dB

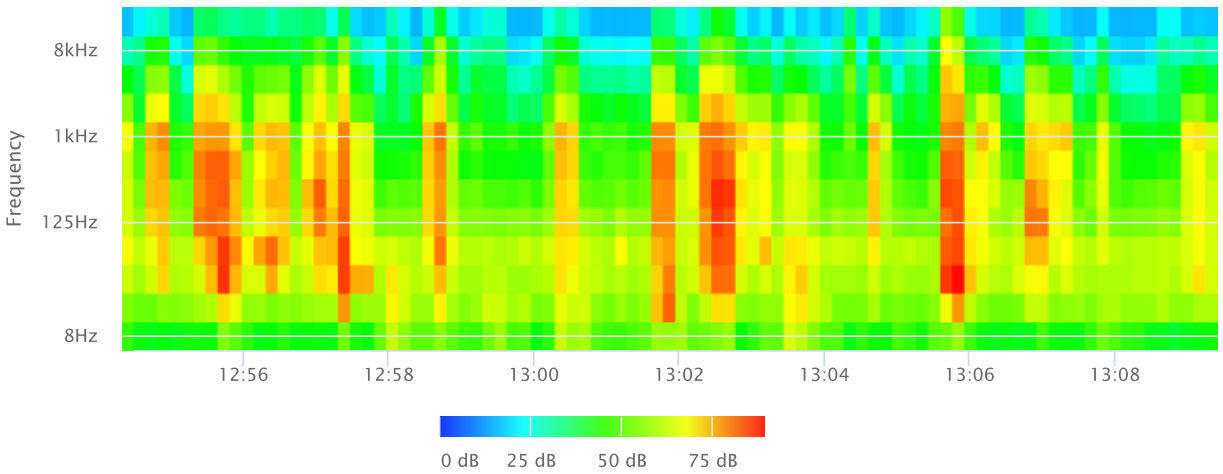
Time History



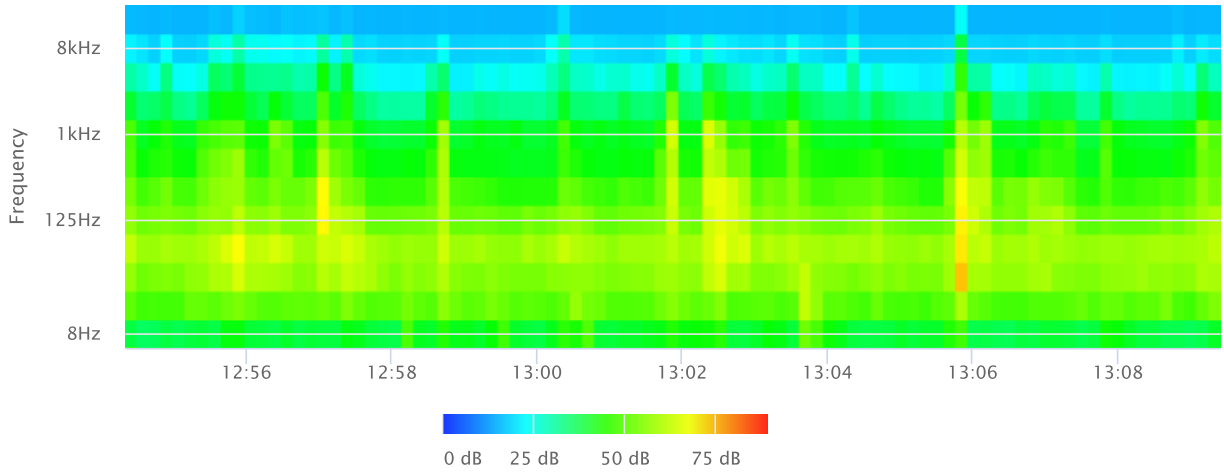
OBA 1/1 Leq



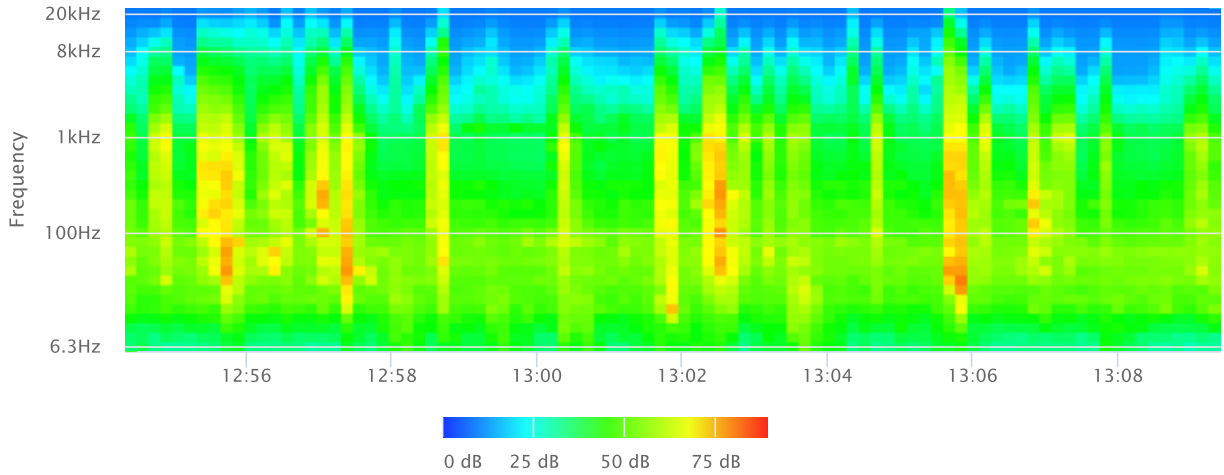
OBA 1/1 Lmax



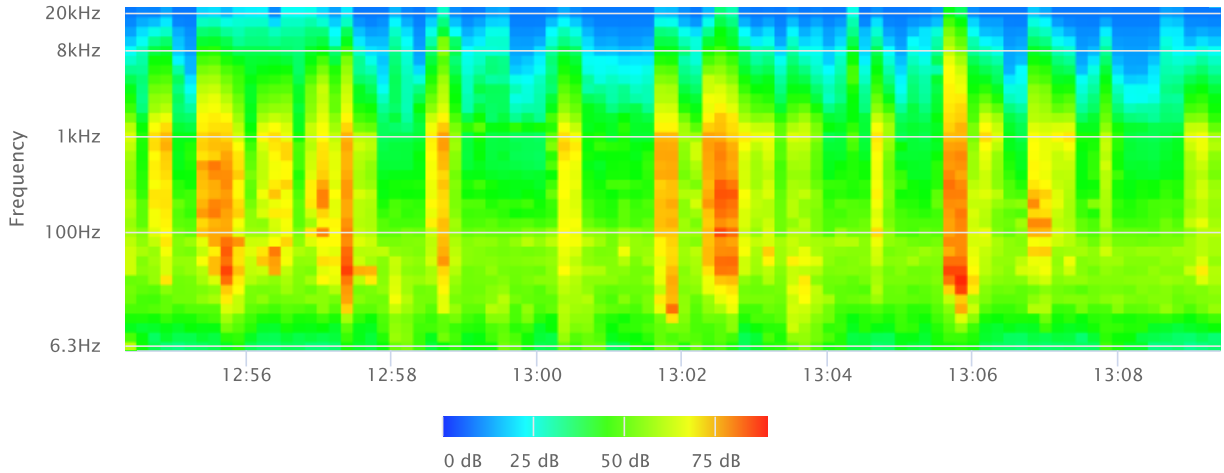
OBA 1/1 Lmin



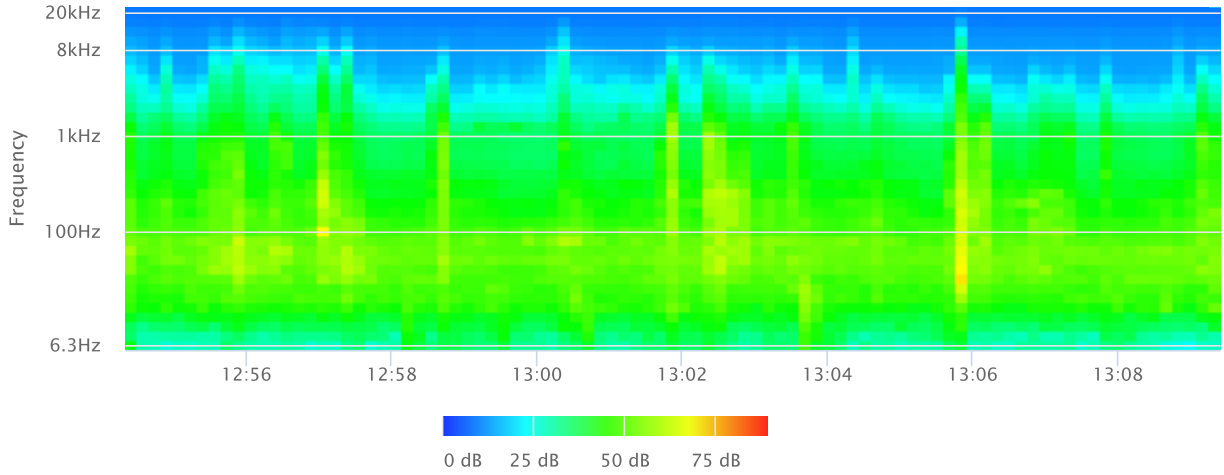
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
12:56
12:58
13:00
13:02
13:04
13:06
13:08
0 dB
25 dB
50 dB
75 dB

Noise Measurement
Field Data

Project Name: Burrtec C&D Processing Facility, City of Victorville **Date:** August 15, 2024

Project #: 19739

Noise Measurement #: STNM4 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 17251 Dante Street, Victorville, 92394

Site Description (Type of Existing Land Use and any other notable features): Measurement Site: Taken just south of Dante Road and west of the Northgae Village Apartments. Adjacent: Dante St (running E-W) adjacent to north with single-family residential further north, multi-family residential adjacent to east/southeast, vacant land to south and west, & 15 Fwy (running NE-SW) ~1,600' east.

Weather: <5% cloud, sunshine. Sunset 7:36 PM **Settings:** SLOW FAST

Temperature: 86 deg F **Wind:** 6 mph **Humidity:** 20% **Terrain:** Flat

Start Time: 1:32 PM **End Time:** 1:47 PM **Run Time:**

Leq: 56.1 dB

Lmax 72.7 dB

L2 67.2 dB

L8 59.9 dB

L25 50.1 dB

L50 48.1 dB

Primary Noise Source: Traffic noise from the 14 vehicles passing STNM4 microphone traveling along Dante Street (running E-W) just S of STNM4.

Secondary Noise Sources: Traffic ambiance from the 15 Fwy (~1,600' E of STNM4). Noise from occasional air traffic. Some bird noise, ravens. Some residential ambiance.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CAL 250
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CAL 250
SERIAL NUMBER:	3099	**SERIAL NUMBER:**	2723
FACTORY CALIBRATION DATE:	7/31/2024	**FACTORY CALIBRATION DATE:**	10/7/2024
FIELD CALIBRATION DATE:	8/15/2024		

Noise Measurement
Field Data

PHOTOS:



STNM4 looking NE across Dante Street towards Dante Street & Mars Avenue intersection (~150'). Residence 17200 Dante Street on the left of image.



STNM4 looking E down Dante Street. Dante Street & Mars Avenue intersection on the left (~150'). Multifamily residence 17251 Dante Street on the right of image.

Summary	
File Name on Meter	LxT_Data.421.s
File Name on PC	LxT_0003099-20240815 133257-LxT_Data.421.ldbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM4 34°33'51.97"N 117°17'19.16"W
Job Description	15 minute noise measurement
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville

Measurement	
Start	2024-08-15 13:32:57
Stop	2024-08-15 13:47:57
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2024-08-15 13:32:32
Post-Calibration	None
Calibration Deviation	---

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				
LA_{eq}	56.1			
LAE	85.7			
EA	41.09916 µPa²h			
EA8	1.315173 mPa²h			
EA40	6.575865 mPa²h			
$LA_{peak\ (max)}$	2024-08-15 13:47:27	92.8 dB		
LAS_{max}	2024-08-15 13:47:46	72.7 dB		
LAS_{min}	2024-08-15 13:38:03	44.5 dB		

		Statistics	
LC_{eq}	68.3 dB	**LA2.00**	67.2 dB
LA_{eq}	56.1 dB	**LA8.00**	59.9 dB
LC_{eq} - LA_{eq}	12.1 dB	**LA25.00**	50.1 dB
LAI_{eq}	59.6 dB	**LA50.00**	48.1 dB
LA_{eq}	56.1 dB	**LA66.60**	47.2 dB
LAI_{eq} - LA_{eq}	3.5 dB	**LA90.00**	45.7 dB
Overload Count	0		
Overload Duration	0.0 s		

Measurement Report

Report Summary

Meter's File Name	LxT_Data.421.s	Computer's File Name	LxT_0003099-20240815 133257-LxT_Data.421.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM4 34°33'51.97"N 117°17'19.16"W
Job Description	15 minute noise measurement		
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville		
Start Time	2024-08-15 13:32:57	Duration	0:15:00.0
End Time	2024-08-15 13:47:57	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	56.1 dB		
LAE	85.7 dB	SEA	--- dB
EA	41.1 µPa²h	LAFTM5	62.2 dB
EA8	1.3 mPa²h		
EA40	6.6 mPa²h		
LA_{peak}	92.8 dB	2024-08-15 13:47:27	
LAS_{max}	72.7 dB	2024-08-15 13:47:46	
LAS_{min}	44.5 dB	2024-08-15 13:38:03	
LA_{eq}	56.1 dB		
LC_{eq}	68.3 dB	LC_{eq} - LA_{eq}	12.1 dB
LAI_{eq}	59.6 dB	LAI_{eq} - LA_{eq}	3.5 dB

Exceedances	Count	Duration
LAS > 65.0 dB	9	0:00:39.5
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 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

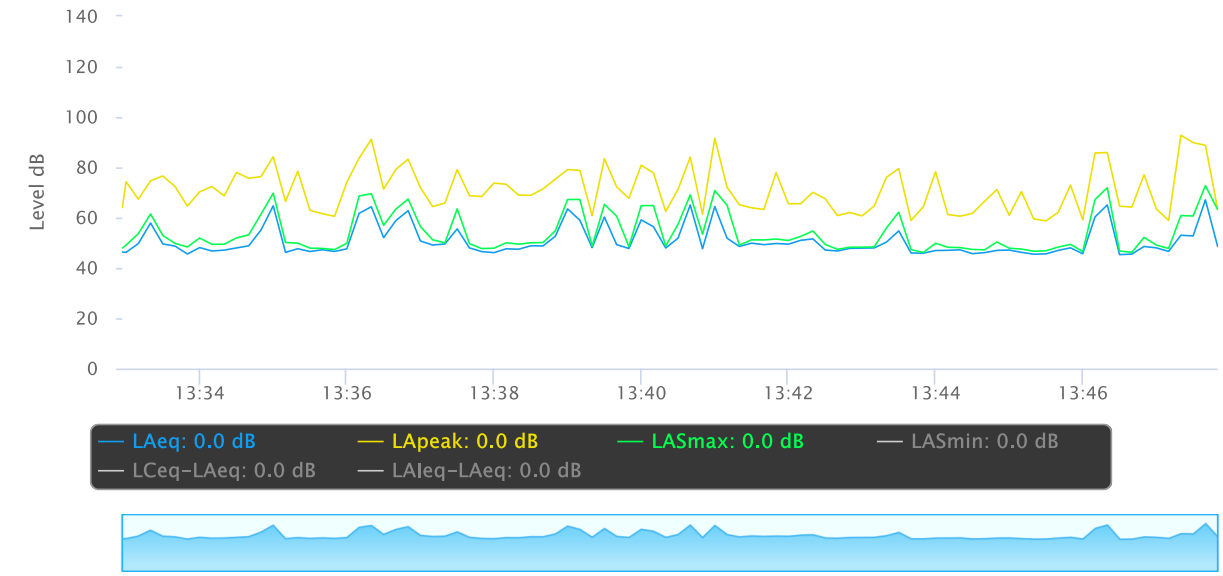
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	56.1 dB		68.3 dB		--- dB	
$L_{S(max)}$	72.7 dB	2024-08-15 13:47:46	--- dB		--- dB	
$L_{S(min)}$	44.5 dB	2024-08-15 13:38:03	--- dB		--- dB	
$L_{Peak(max)}$	92.8 dB	2024-08-15 13:47:27	--- dB		--- dB	

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

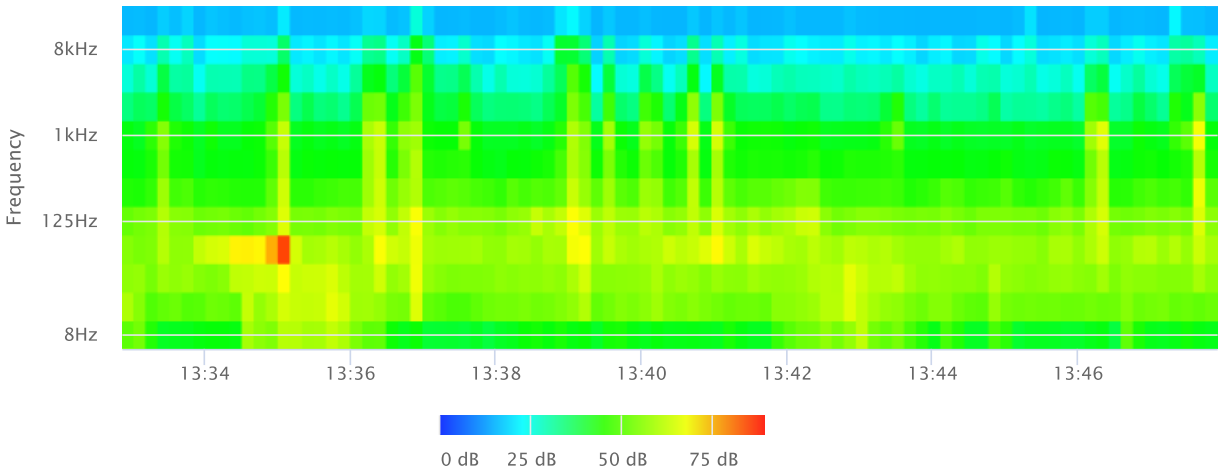
Statistics

LAS 2.0	67.2 dB
LAS 8.0	59.9 dB
LAS 25.0	50.1 dB
LAS 50.0	48.1 dB
LAS 66.6	47.2 dB
LAS 90.0	45.7 dB

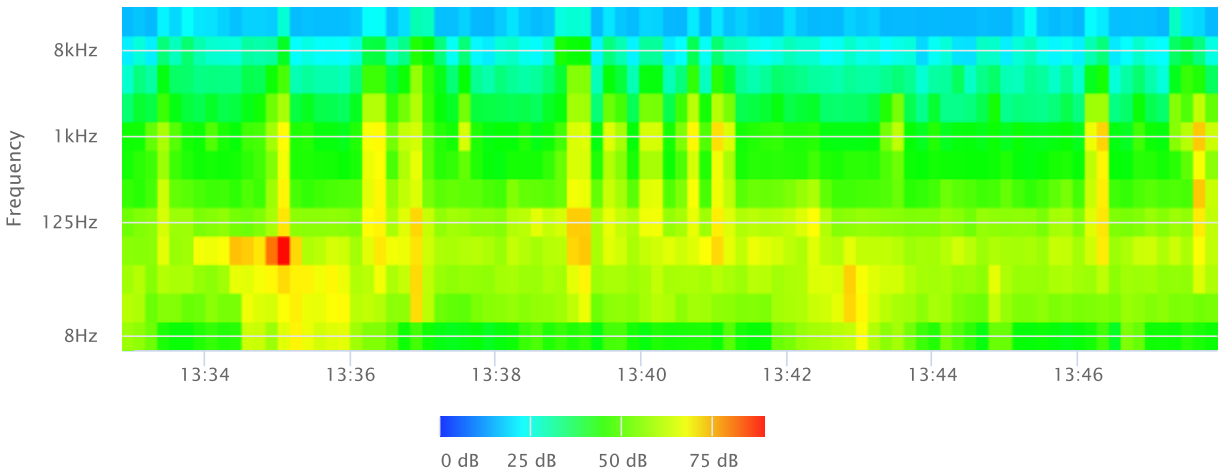
Time History



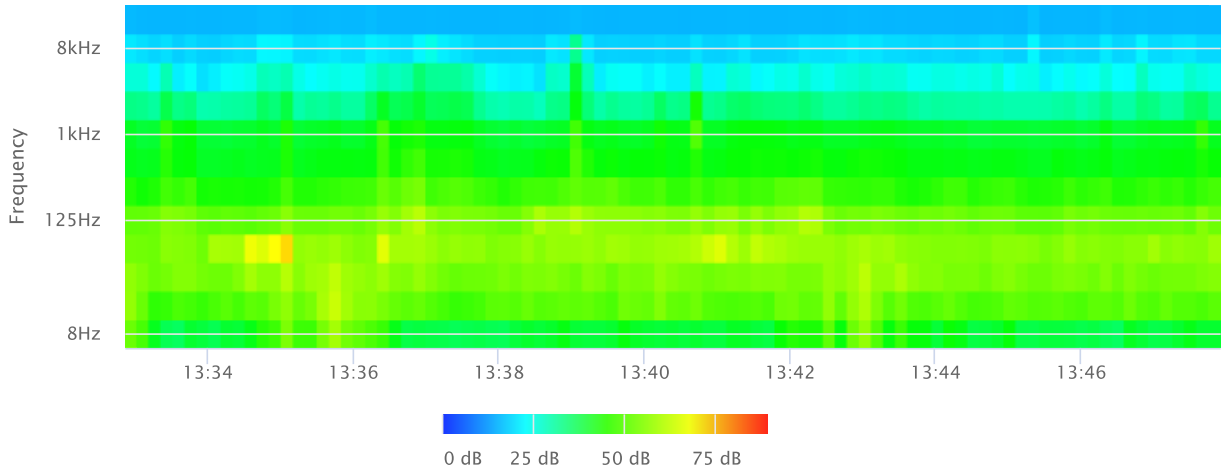
OBA 1/1 Leq



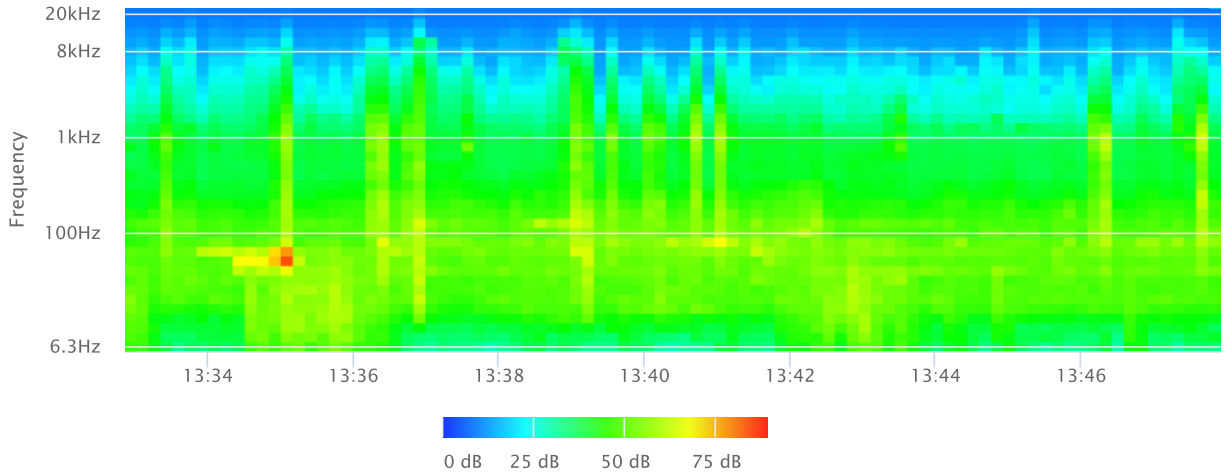
OBA 1/1 Lmax



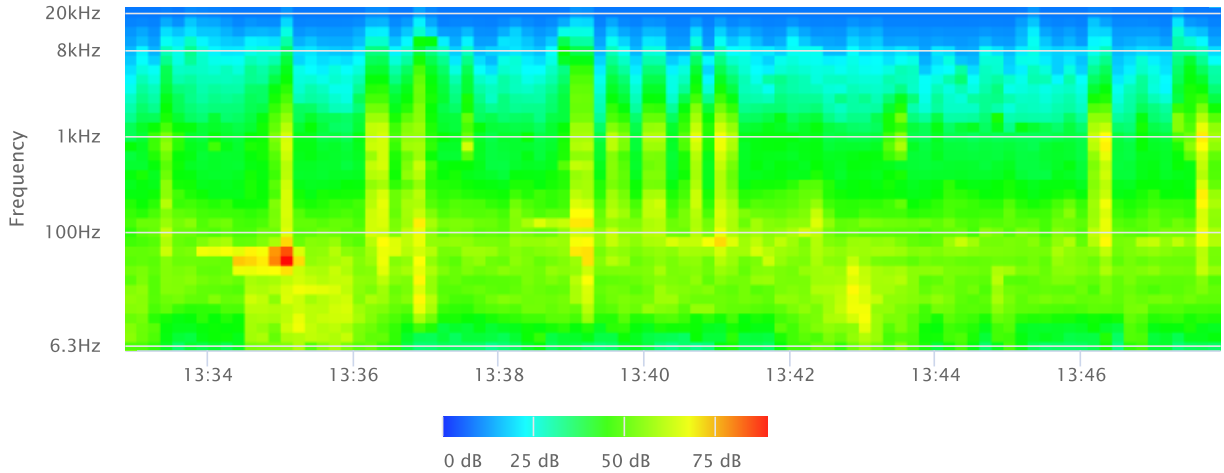
OBA 1/1 Lmin



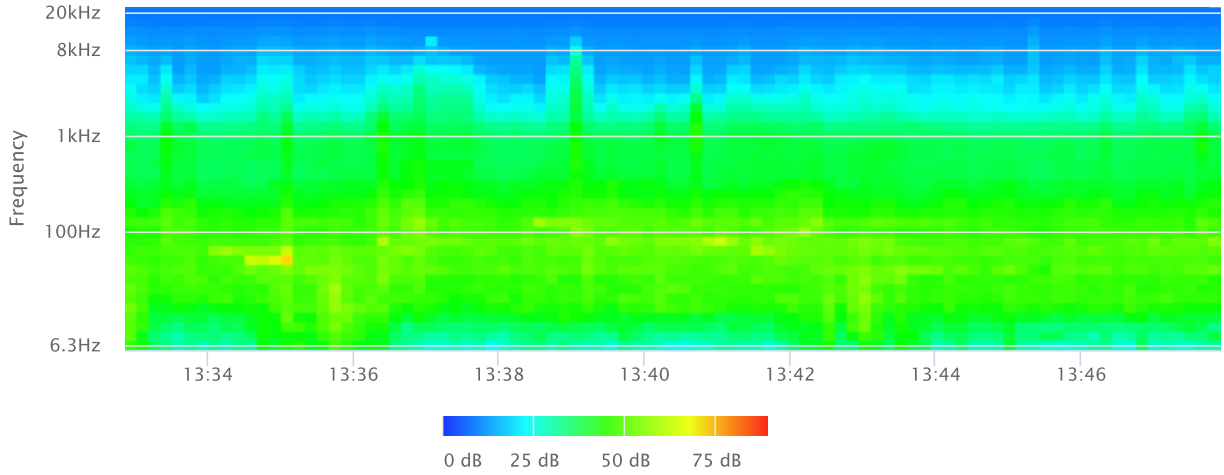
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
13:34
13:36
13:38
13:40
13:42
13:44
13:46
0 dB
25 dB
50 dB
75 dB

Noise Measurement
Field Data

Project Name: Burrtec C&D Processing Facility, City of Victorville **Date:** August 15, 2024

Project #: 19739

Noise Measurement #: STNM5 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 16992 Abbey Lane, Victorville, 92394

Site Description (Type of Existing Land Use and any other notable features): Measurement Site: Taken just W of residence 16992 Abbey Ln. Adjacent: Abbey Ln (running E-W) ~100' south with vacant land further south, project site to west, & 15 Fwy (running NE-SW) ~2,200' east. Trash truck access to site area just W of STNM5, with site area currently part of active trash processing facility.

Weather: <5% cloud, sunshine. Sunset 7:36 PM **Settings:** SLOW FAST

Temperature: 86 deg F **Wind:** 6 mph **Humidity:** 20% **Terrain:** Flat

Start Time: 2:33 PM **End Time:** 2:48 PM **Run Time:**

Leq: 55.9 dB

Lmax 67.4 dB

L2 63.6 dB

L8 59.9 dB

L25 56.6 dB

L50 52.5 dB

Primary Noise Source: Industrial noise from active garbage trucks moving trash from one place to another in site area (just N of STNM5). 2 trash trucks passed STNM5 along access road.

Secondary Noise Sources: Traffic ambiance from the 15 Fwy (~2,200' E of STNM5). Noise from occasional air traffic. Some bird noise, ravens. Distant freight train, engine & train horn.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CAL 250
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CAL 250
SERIAL NUMBER:	3099	**SERIAL NUMBER:**	2723
FACTORY CALIBRATION DATE:	7/31/2024	**FACTORY CALIBRATION DATE:**	10/7/2024
FIELD CALIBRATION DATE:	8/15/2024		

Noise Measurement
Field Data

PHOTOS:



STNM5 looking N along dirt access road towards site area. Currently being used as storage & processing area for what appears to be general domestic waste.



STNM5 looking E towards backyard of residence 16992 Abbey Lane, Victorville.

Summary	
File Name on Meter	LxT_Data.422.s
File Name on PC	LxT_0003099-20240815 143310-LxT_Data.422.ldbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM5 34°33'40.08"N 117°17'35.78"W
Job Description	15 minute noise measurement
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville

Measurement	
Start	2024-08-15 14:33:10
Stop	2024-08-15 14:48:10
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2024-08-15 14:32:33
Post-Calibration	None
Calibration Deviation	---

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	122.7 dB

Results						
LA_{eq}	55.9					
LAE	85.4					
EA	38.89407	µPa²h				
EA8	1.24461	mPa²h				
EA40	6.22305	mPa²h				
$LA_{peak\ (max)}$	2024-08-15 14:36:42		88.8	dB		
LAS_{max}	2024-08-15 14:47:06		67.4	dB		
LAS_{min}	2024-08-15 14:42:53		46.7	dB		
LC_{eq}	70.2	dB				
LA_{eq}	55.9	dB				
LC_{eq} - LA_{eq}	14.3	dB				
LAI_{eq}	60.5	dB				
LA_{eq}	55.9	dB				
LAI_{eq} - LA_{eq}	4.6	dB				
Overload Count	0					
Overload Duration	0.0	s				

Statistics		
LA2.00	63.6	dB
LA8.00	59.9	dB
LA25.00	56.6	dB
LA50.00	52.5	dB
LA66.60	51.2	dB
LA90.00	48.9	dB

Measurement Report

Report Summary

Meter's File Name	LxT_Data.422.s	Computer's File Name	LxT_0003099-20240815 143310-LxT_Data.422.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM5 34°33'40.08"N 117°17'35.78"W
Job Description	15 minute noise measurement		
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville		
Start Time	2024-08-15 14:33:10	Duration	0:15:00.0
End Time	2024-08-15 14:48:10	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	55.9 dB		
LAE	85.4 dB	SEA	--- dB
EA	38.9 µPa²h	LAFTM5	62.3 dB
EA8	1.2 mPa²h		
EA40	6.2 mPa²h		
LA_{peak}	88.8 dB	2024-08-15 14:36:42	
LAS_{max}	67.4 dB	2024-08-15 14:47:06	
LAS_{min}	46.7 dB	2024-08-15 14:42:53	
LA_{eq}	55.9 dB		
LC_{eq}	70.2 dB	LC_{eq} - LA_{eq}	14.3 dB
LAI_{eq}	60.5 dB	LAI_{eq} - LA_{eq}	4.6 dB

Exceedances	Count	Duration
LAS > 65.0 dB	9	0:00:16.9
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 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

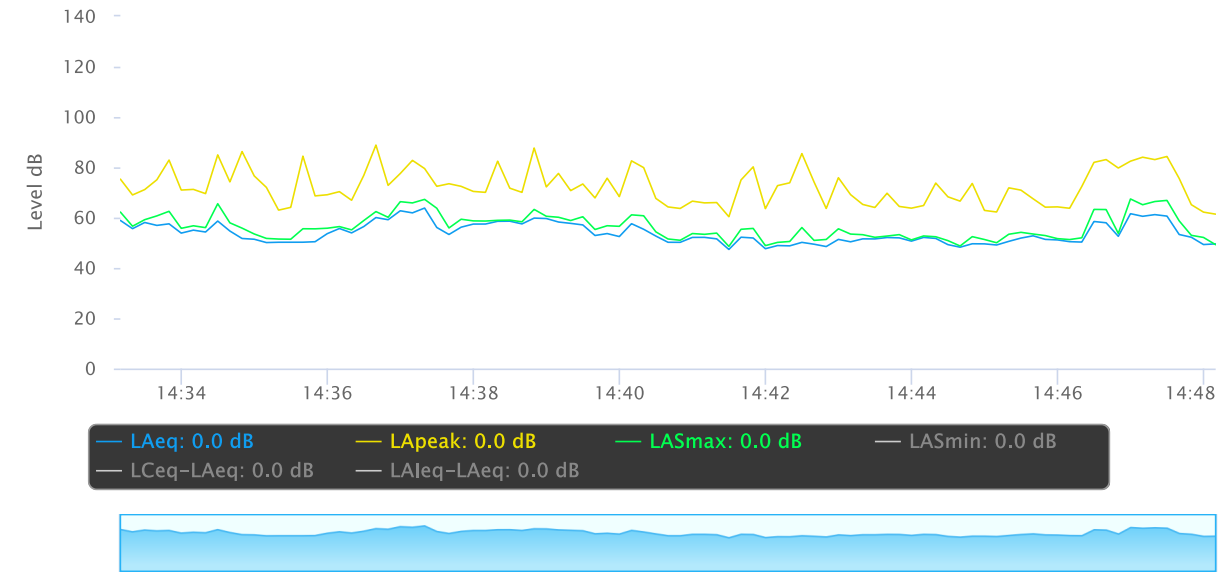
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	55.9 dB		70.2 dB		--- dB	
$L_{S(max)}$	67.4 dB	2024-08-15 14:47:06	--- dB		--- dB	
$L_{S(min)}$	46.7 dB	2024-08-15 14:42:53	--- dB		--- dB	
$L_{Peak(max)}$	88.8 dB	2024-08-15 14:36:42	--- dB		--- dB	

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

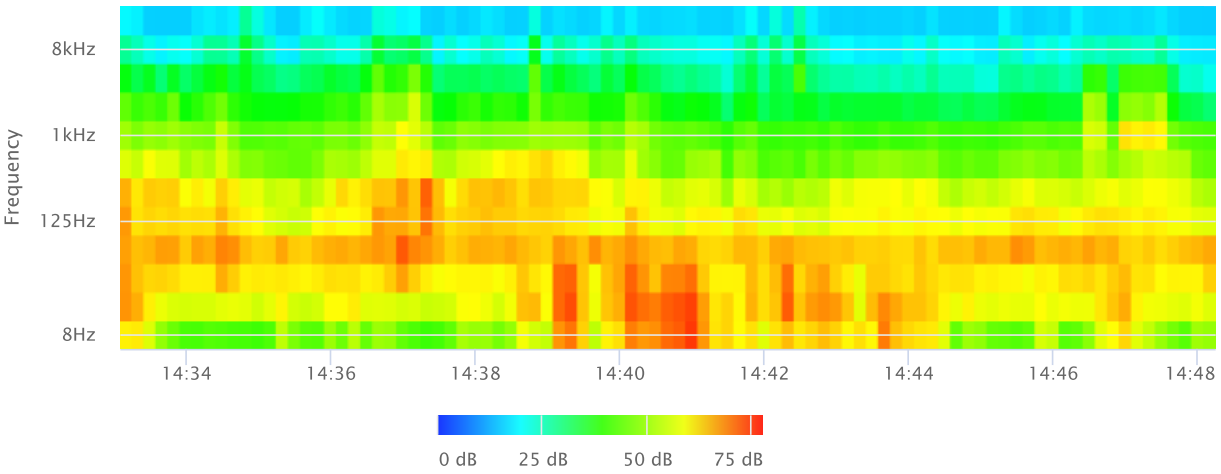
Statistics

LAS 2.0	63.6 dB
LAS 8.0	59.9 dB
LAS 25.0	56.6 dB
LAS 50.0	52.5 dB
LAS 66.6	51.2 dB
LAS 90.0	48.9 dB

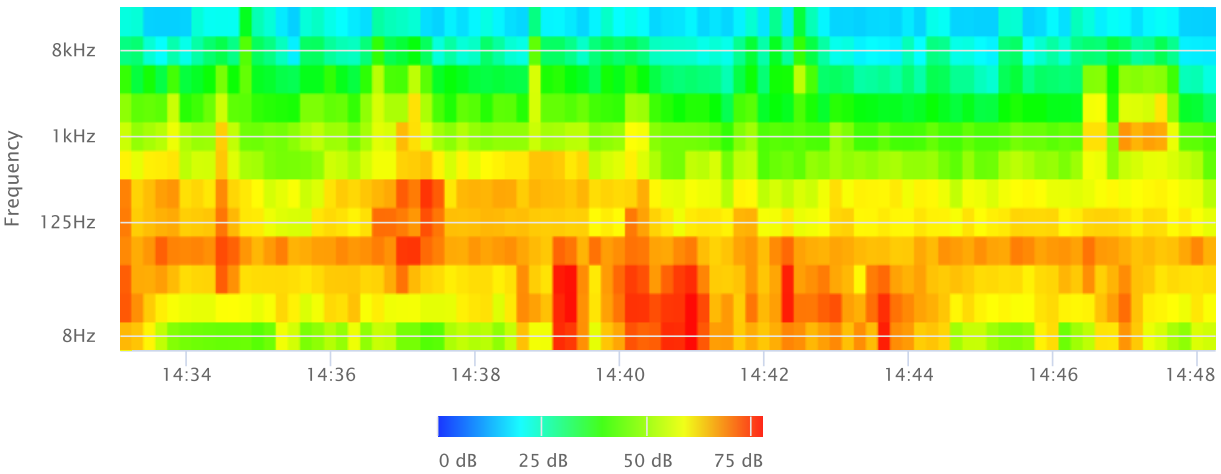
Time History



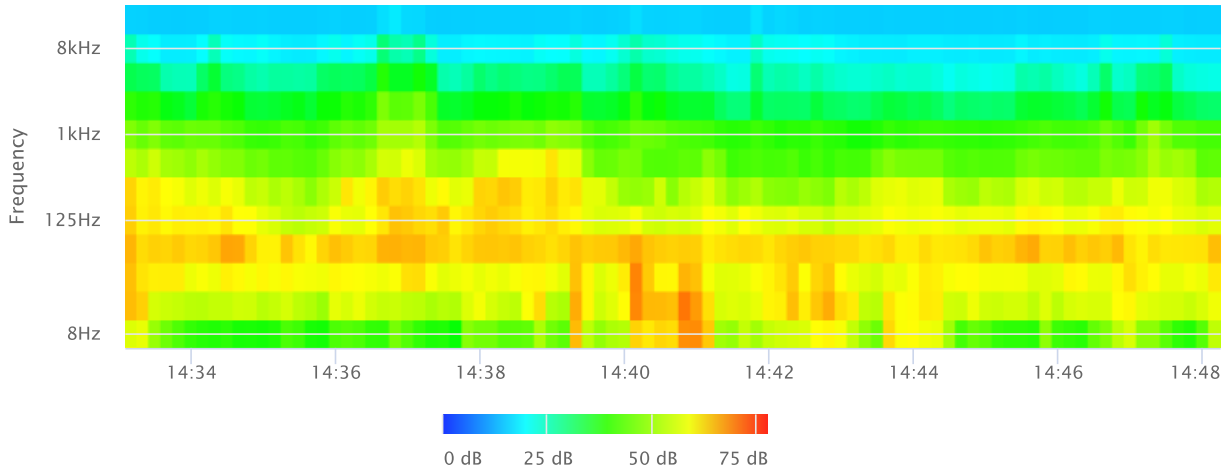
OBA 1/1 Leq



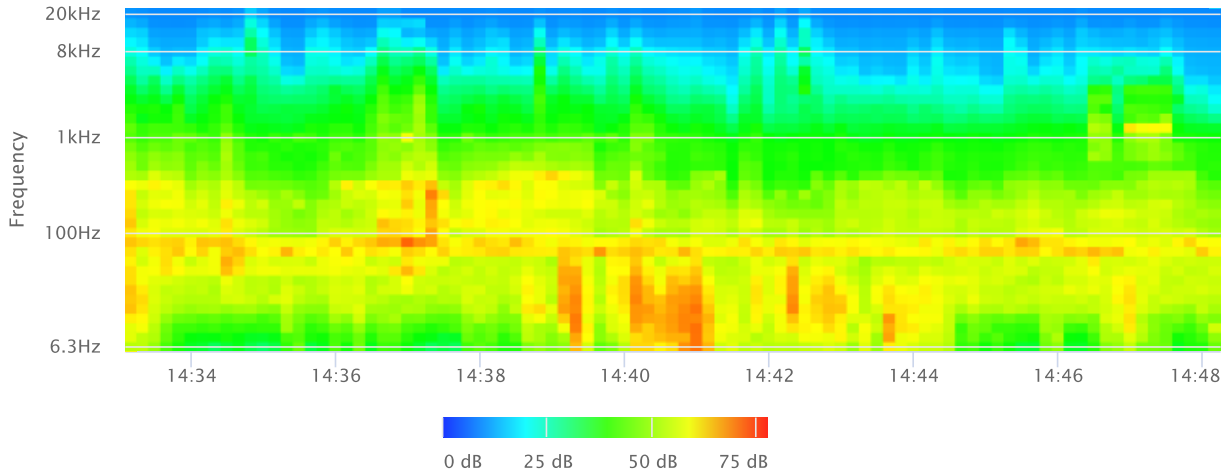
OBA 1/1 Lmax



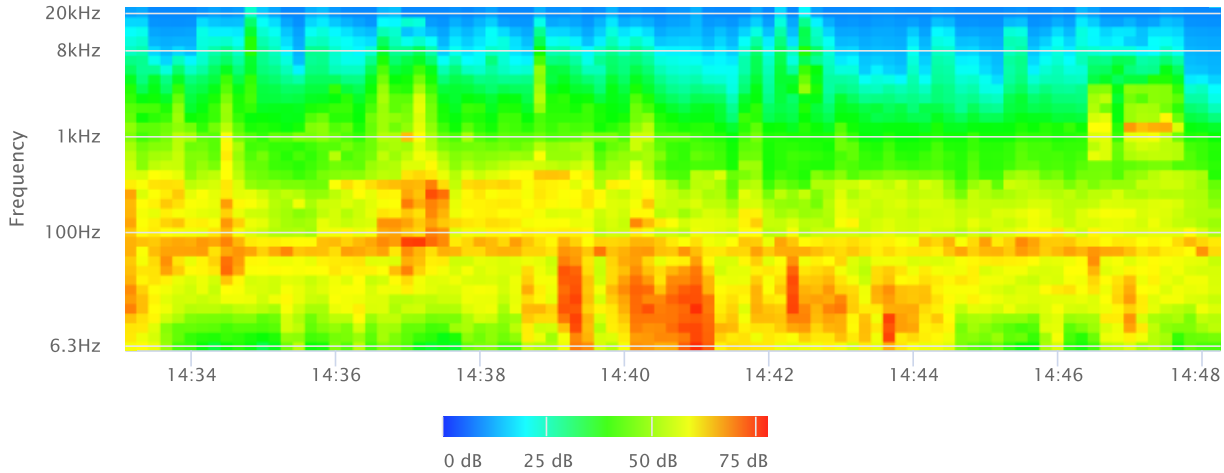
OBA 1/1 Lmin



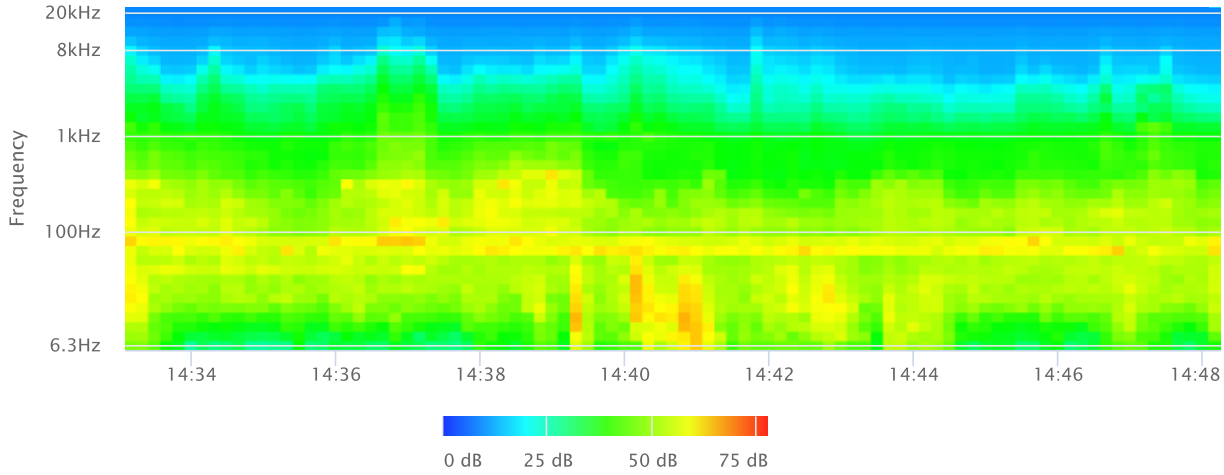
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
14:34
14:36
14:38
14:40
14:42
14:44
14:46
14:48
0 dB
25 dB
50 dB
75 dB

Noise Measurement
Field Data

Project Name: Burrtec C&D Processing Facility, City of Victorville **Date:** August 15, 2024

Project #: 19739

Noise Measurement #: STNM6 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: Park, 17074 to 17078 Stoddard Wells Rd, Victorville, CA 92394.

Site Description (Type of Existing Land Use and any other notable features): Measurement Site: Taken just W of park located at 17074 - 8 Stoddard Wells Rd . Adjacent: Park use adjacent to east, project site adjacent to west, Abbey Ln (running E-W) ~530' south, & 15 Fwy (running NE-SW) ~2,400' east. Site area currently part of active trash processing facility.

Weather: <5% cloud, sunshine. Sunset 7:36 PM **Settings:** SLOW FAST

Temperature: 86 deg F **Wind:** 6 mph **Humidity:** 20% **Terrain:** Flat

Start Time: 3:05 PM **End Time:** 3:20 PM **Run Time:**

Leq: 45.5 dB **Primary Noise Source:** Industrial noise from active garbage trucks moving trash from one place to another

Lmax 56 dB in site area just W of STNM6.

L2 49.6 dB **Secondary Noise Sources:** Traffic ambiance from the 15 Fwy (~2,400' E of STNM6). Noise from occasional air

L8 48.0 dB traffic. Some bird noise, ravens. Distant freight train engine & train horn.

L25 46.2 dB

L50 44.9 dB

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CAL 250
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CAL 250
SERIAL NUMBER:	3099	**SERIAL NUMBER:**	2723
FACTORY CALIBRATION DATE:	7/31/2024	**FACTORY CALIBRATION DATE:**	10/7/2024
FIELD CALIBRATION DATE:	8/15/2024		

Noise Measurement
Field Data

PHOTOS:



STNM6 looking SE towards park area & baseball field, 17074 to 17078 Stoddard Wells Rd, Victorville.



STNM6 looking WNW towards NW corner of site area. Trash processing active within site area.

Summary	
File Name on Meter	LxT_Data.423.s
File Name on PC	LxT_0003099-20240815 150501-LxT_Data.423.ldbin
Serial Number	3099
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM6 34°33'44.26"N 117°17'34.42"W
Job Description	15 minute noise measurement
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville

Measurement	
Start	2024-08-15 15:05:01
Stop	2024-08-15 15:20:01
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2024-08-15 15:04:36
Post-Calibration	None
Calibration Deviation	---

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	122.5 dB

Results			
LA_{eq}	45.5		
LAE	75.0		
EA	3.527974	µPa²h	
EA8	112.8952	µPa²h	
EA40	564.4759	µPa²h	
$LA_{peak\ (max)}$	2024-08-15 15:08:29	84.9	dB
LAS_{max}	2024-08-15 15:12:47	56.0	dB
LAS_{min}	2024-08-15 15:06:18	40.8	dB

			Statistics	
LC_{eq}	62.4	dB	**LA2.00**	49.6 dB
LA_{eq}	45.5	dB	**LA8.00**	48.0 dB
LC_{eq} - LA_{eq}	16.9	dB	**LA25.00**	46.2 dB
LAI_{eq}	49.1	dB	**LA50.00**	44.9 dB
LA_{eq}	45.5	dB	**LA66.60**	43.8 dB
LAI_{eq} - LA_{eq}	3.6	dB	**LA90.00**	42.3 dB
Overload Count	0			
Overload Duration	0.0	s		

Measurement Report

Report Summary

Meter's File Name	LxT_Data.423.s	Computer's File Name	LxT_0003099-20240815 150501-LxT_Data.423.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM6 34°33'44.26"N 117°17'34.42"W
Job Description	15 minute noise measurement		
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville		
Start Time	2024-08-15 15:05:01	Duration	0:15:00.0
End Time	2024-08-15 15:20:01	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	45.5 dB		
LAE	75.0 dB	SEA	--- dB
EA	3.5 µPa²h	LAFTM5	50.2 dB
EA8	112.9 µPa²h		
EA40	564.5 µPa²h		
LA_{peak}	84.9 dB	2024-08-15 15:08:29	
LAS_{max}	56.0 dB	2024-08-15 15:12:47	
LAS_{min}	40.8 dB	2024-08-15 15:06:18	
LA_{eq}	45.5 dB		
LC_{eq}	62.4 dB	LC_{eq} - LA_{eq}	16.9 dB
LAI_{eq}	49.1 dB	LAI_{eq} - LA_{eq}	3.6 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	0	0:00:00.0
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 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

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	45.5 dB		62.4 dB		--- dB	
$L_{S(max)}$	56.0 dB	2024-08-15 15:12:47	--- dB		--- dB	
$L_{S(min)}$	40.8 dB	2024-08-15 15:06:18	--- dB		--- dB	
$L_{Peak(max)}$	84.9 dB	2024-08-15 15:08:29	--- dB		--- dB	

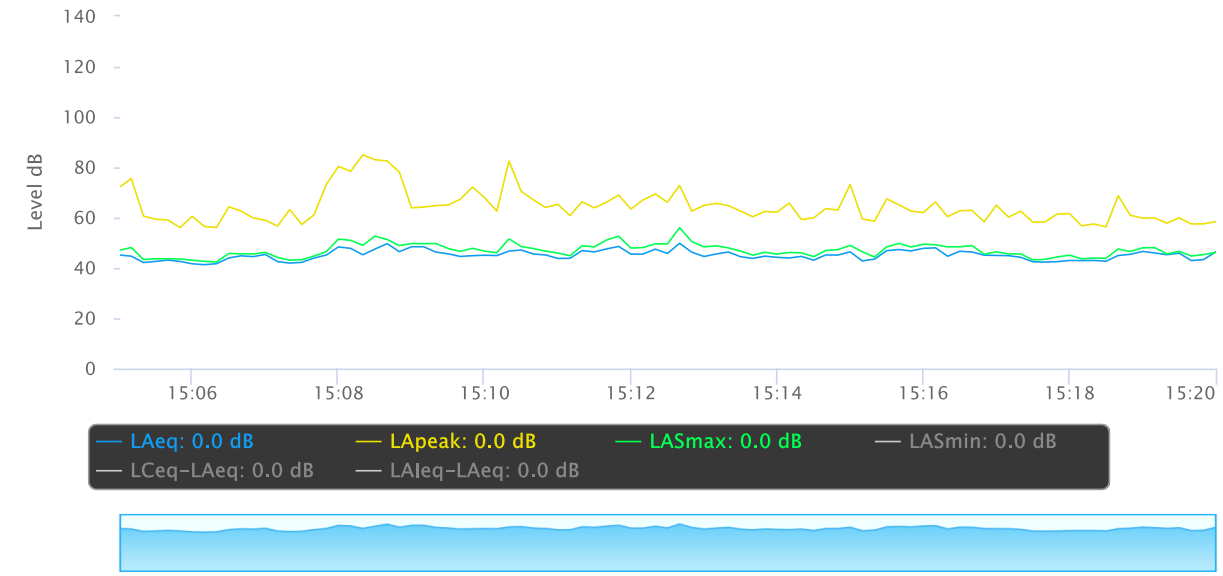
Overloads

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

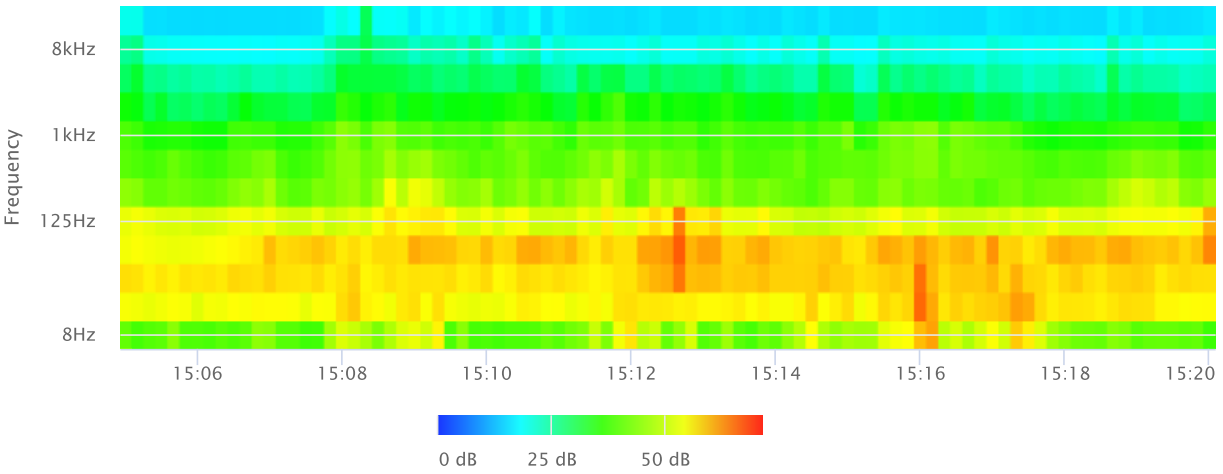
Statistics

LAS 2.0	49.6 dB
LAS 8.0	48.0 dB
LAS 25.0	46.2 dB
LAS 50.0	44.9 dB
LAS 66.6	43.8 dB
LAS 90.0	42.3 dB

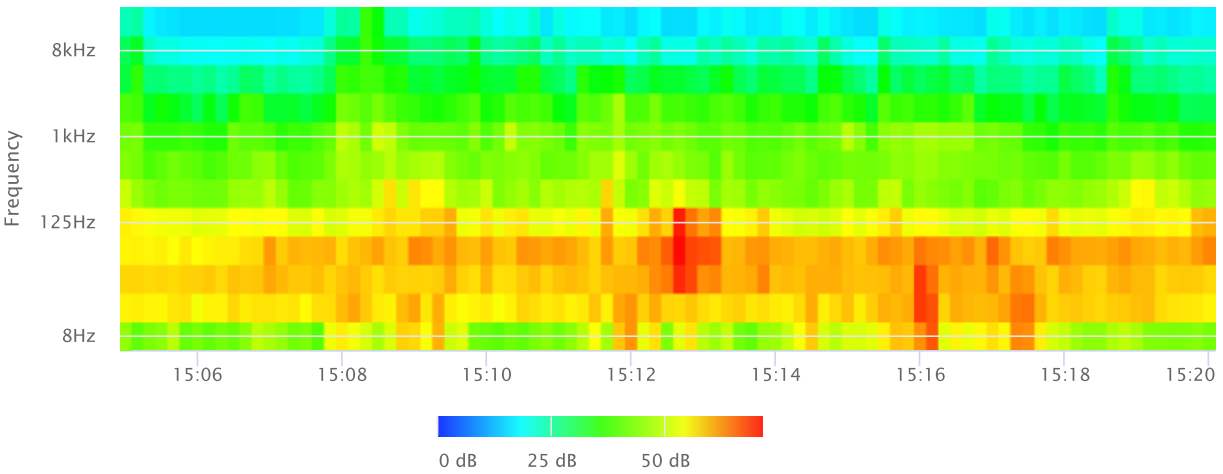
Time History



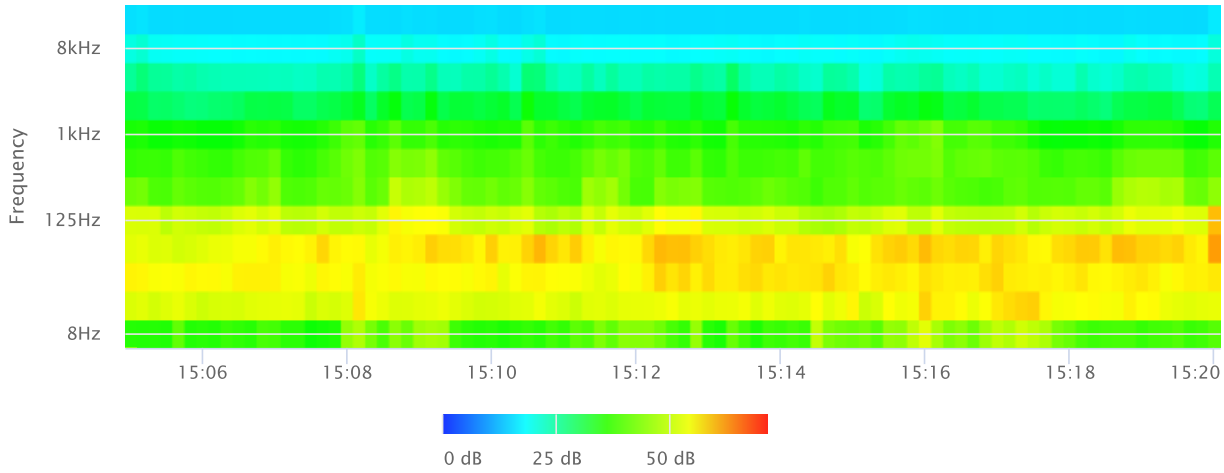
OBA 1/1 Leq



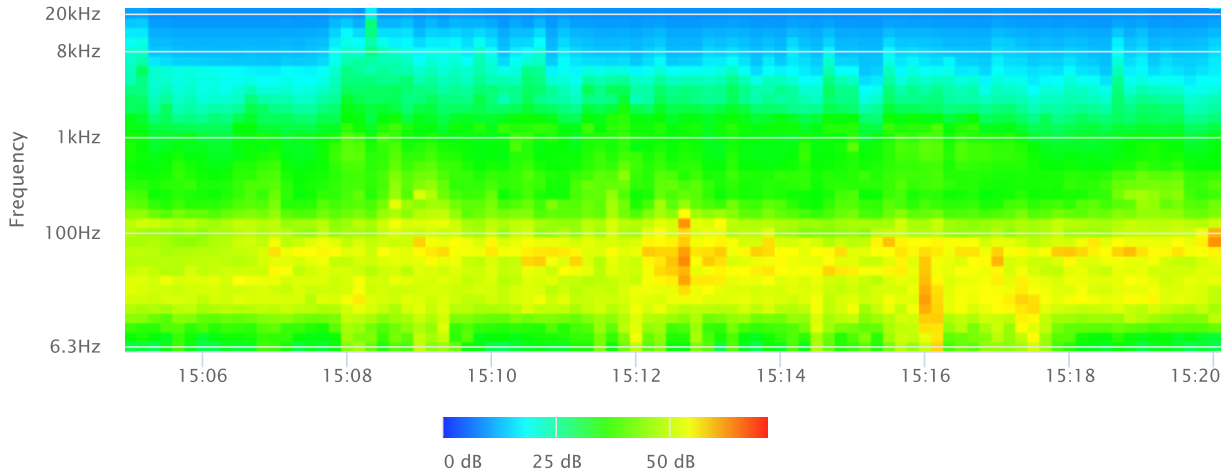
OBA 1/1 Lmax



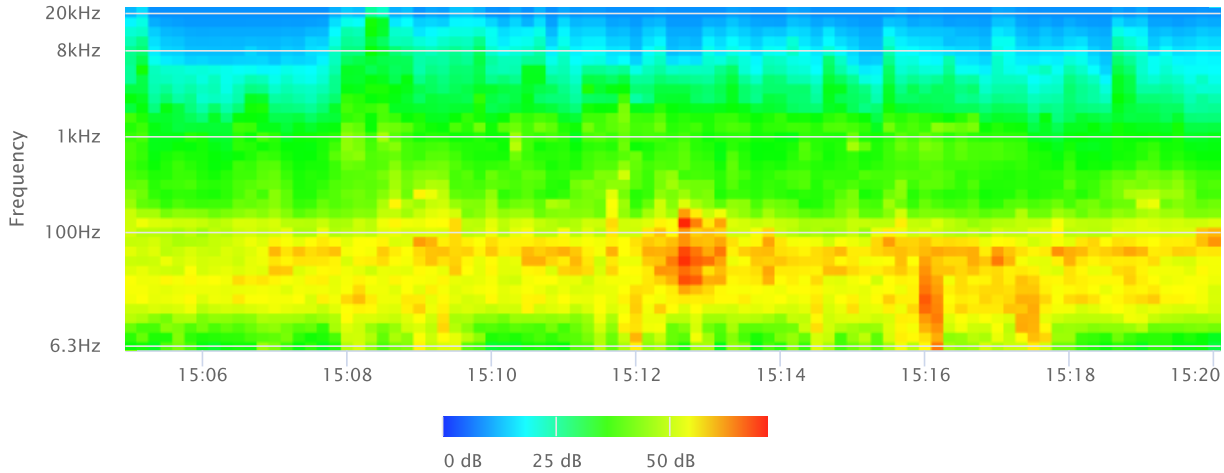
OBA 1/1 Lmin



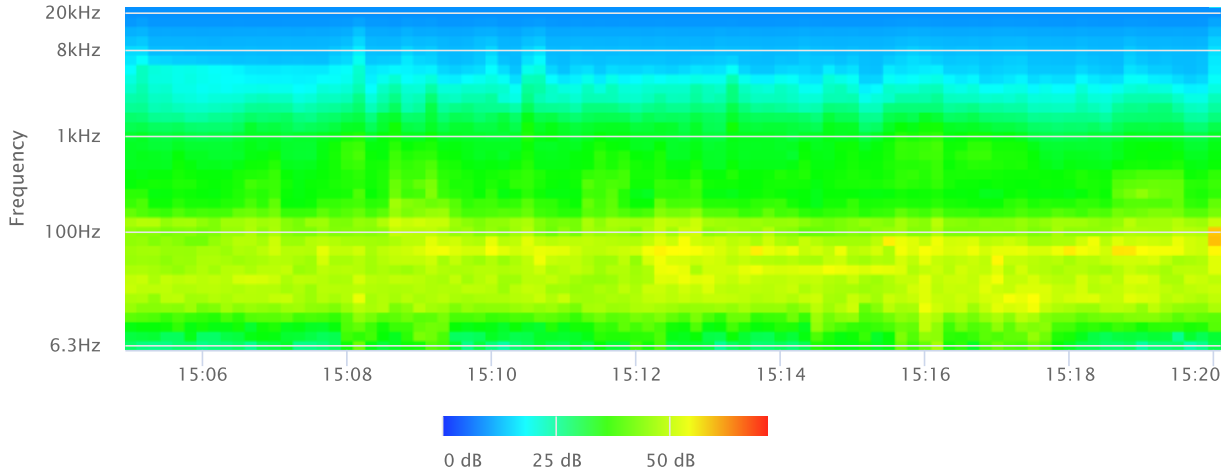
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
15:06
15:08
15:10
15:12
15:14
15:16
15:18
15:20
0 dB
25 dB
50 dB

Noise Measurement
Field Data

Project Name: Burrtec C&D Processing Facility, City of Victorville **Date:** August 15, 2024

Project #: 19739

Noise Measurement #: STNM7 Run Time: 15 minutes **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 17000 Abbey Lane, Victorville, CA 92394.

Site Description (Type of Existing Land Use and any other notable features): Measurement Site: Taken ~200' E of E Abbey Lane, NW corner of site area. Adjacent: Vacant land adjacent to north, project site ajdacne to south/southeast, Abbey Ln (running E-W) ~645' south, E Abbey Ln (running N-S) ~220' west, & 15 Fwy (running NE-SW) ~2,800' east. Site area currently part of active trash processing facility.

Weather: <5% cloud, sunshine. Sunset 7:36 PM **Settings:** SLOW FAST

Temperature: 86 deg F **Wind:** 6 mph **Humidity:** 20% **Terrain:** Flat

Start Time: 3:37 PM **End Time:** 3:52 PM **Run Time:**

Leq: 56.5 dB

Lmax 72.5 dB

L2 63.1 dB

L8 59.7 dB

L25 56.9 dB

L50 54.2 dB

Primary Noise Source: Industrial noise from active garbage trucks moving trash from one place to another in site area just E of STNM7.

Secondary Noise Sources: Traffic ambiance from the 15 Fwy (~2,800' E of STNM7). Noise from occasional air traffic. Some bird noise, ravens. Distant freight train engine & train horn.

NOISE METER:	SoundTrack LXT Class 1	**CALIBRATOR:**	Larson Davis CAL 250
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	CAL 250
SERIAL NUMBER:	3099	**SERIAL NUMBER:**	2723
FACTORY CALIBRATION DATE:	7/31/2024	**FACTORY CALIBRATION DATE:**	10/7/2024
FIELD CALIBRATION DATE:	8/15/2024		

Noise Measurement
Field Data

PHOTOS:



STNM7 looking W from NW corner of site area towards E Abbey Lane & Entry/Exit to area 17000 Abbey Lane, Victorville (~220' W).



STNM7 looking E towards site area, apparently currently being used as trash sorting & storage area.

Summary			
File Name on Meter	LxT_Data.424.s		
File Name on PC	LxT_0003099-20240815 153756-LxT_Data.424.ldbin		
Serial Number	0003099		
Model	SoundTrack LxT®		
Firmware Version	2.404		
User	Ian Edward Gallagher		
Location	STNM7 34°33'45.32"N 117°17'40.05"W		
Job Description	15 minute noise measurement		
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville		
Measurement			
Start	2024-08-15 15:37:56		
Stop	2024-08-15 15:52:56		
Duration	00:15:00.0		
Run Time	00:15:00.0		
Pause	00:00:00.0		
Pre-Calibration	2024-08-15 15:37:35		
Post-Calibration	None		
Calibration Deviation	---		
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	122.7 dB		
Results			
LA_{eq}	56.5		
LAE	86.0		
EA	44.277 µPa²h		
EA8	1.417 mPa²h		
EA40	7.084 mPa²h		
$LA_{peak\ (max)}$	2024-08-15 15:46:58	92.9 dB	
LAS_{max}	2024-08-15 15:41:42	72.5 dB	
LAS_{min}	2024-08-15 15:52:56	45.8 dB	

		Statistics	
LC_{eq}	69.6 dB	**LA2.00**	63.1 dB
LA_{eq}	56.5 dB	**LA8.00**	59.7 dB
LC_{eq} - LA_{eq}	13.2 dB	**LA25.00**	56.9 dB
LAI_{eq}	62.0 dB	**LA50.00**	54.2 dB
LA_{eq}	56.5 dB	**LA66.60**	52.7 dB
LAI_{eq} - LA_{eq}	5.6 dB	**LA90.00**	50.2 dB
Overload Count	0		
Overload Duration	0.0 s		

Measurement Report

Report Summary

Meter's File Name	LxT_Data.424.s	Computer's File Name	LxT_0003099-20240815 153756-LxT_Data.424.ldbin
Meter	LxT1 0003099		
Firmware	2.404		
User	Ian Edward Gallagher	Location	STNM7 34°33'45.32"N 117°17'40.05"W
Job Description	15 minute noise measurement		
Note	Ganddini Project# 19739 Burrtec C&D Processing Facility, Victorville		
Start Time	2024-08-15 15:37:56	Duration	0:15:00.0
End Time	2024-08-15 15:52:56	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	56.5 dB		
LAE	86.0 dB	SEA	--- dB
EA	44.3 µPa²h	LAFTM5	64.5 dB
EA8	1.4 mPa²h		
EA40	7.1 mPa²h		
LA_{peak}	92.9 dB	2024-08-15 15:46:58	
LAS_{max}	72.5 dB	2024-08-15 15:41:42	
LAS_{min}	45.8 dB	2024-08-15 15:52:56	
LA_{eq}	56.5 dB		
LC_{eq}	69.6 dB	LC_{eq} - LA_{eq}	13.2 dB
LAI_{eq}	62.0 dB	LAI_{eq} - LA_{eq}	5.6 dB

Exceedances	Count	Duration
LAS > 65.0 dB	7	0:00:12.9
LAS > 85.0 dB	0	0:00:00.0
LApeak > 135.0 dB	0	0:00:00.0
LApeak > 137.0 dB	0	0:00:00.0
LApeak > 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

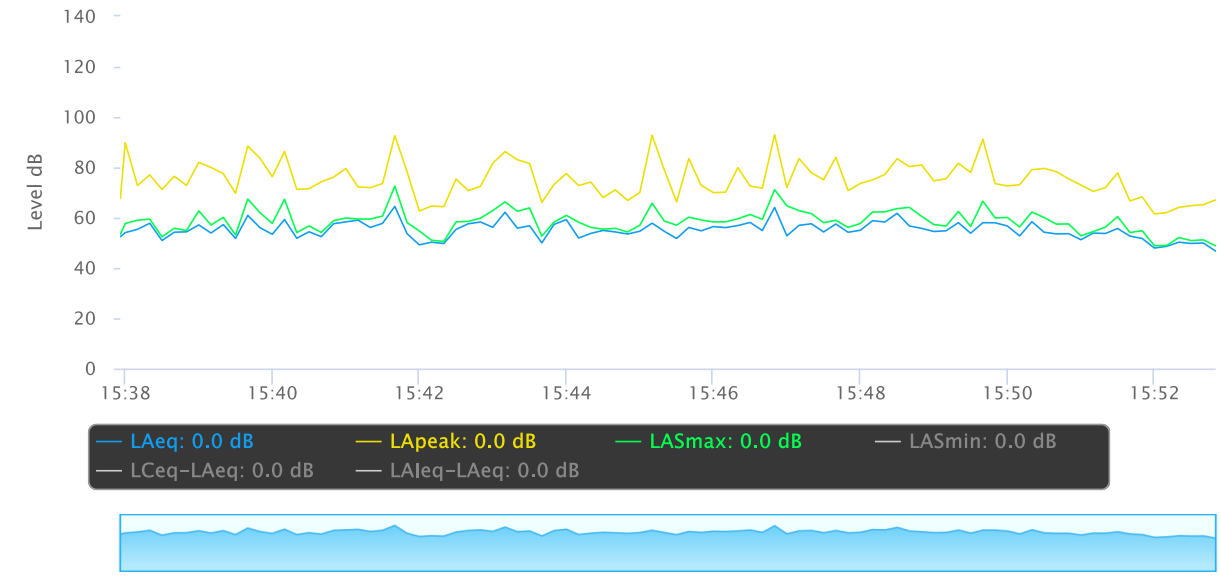
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	56.5 dB		69.6 dB		--- dB	
$L_{S(max)}$	72.5 dB	2024-08-15 15:41:42	--- dB		--- dB	
$L_{S(min)}$	45.8 dB	2024-08-15 15:52:56	--- dB		--- dB	
$L_{Peak(max)}$	92.9 dB	2024-08-15 15:46:58	--- dB		--- dB	

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

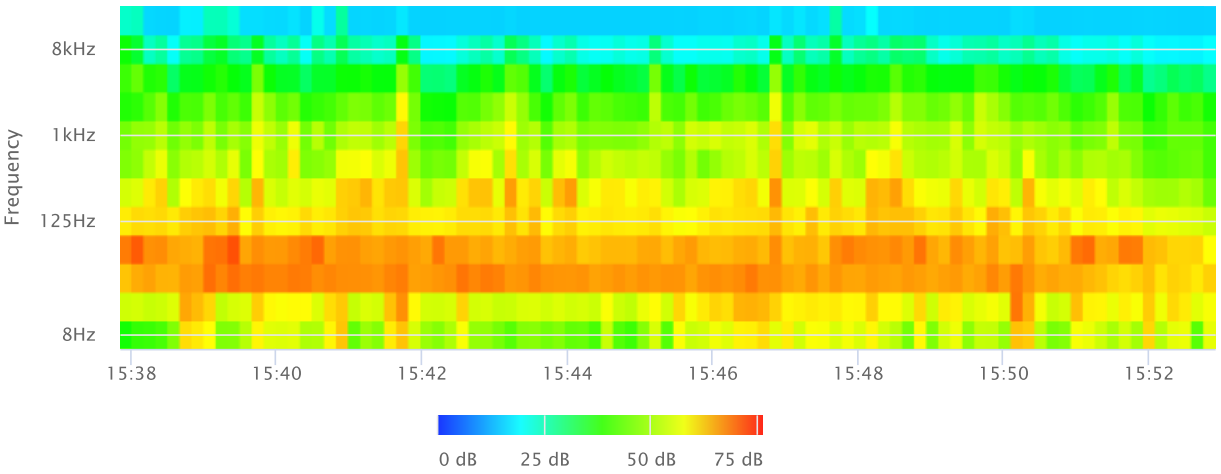
Statistics

LAS 2.0	63.1 dB
LAS 8.0	59.7 dB
LAS 25.0	56.9 dB
LAS 50.0	54.2 dB
LAS 66.6	52.7 dB
LAS 90.0	50.2 dB

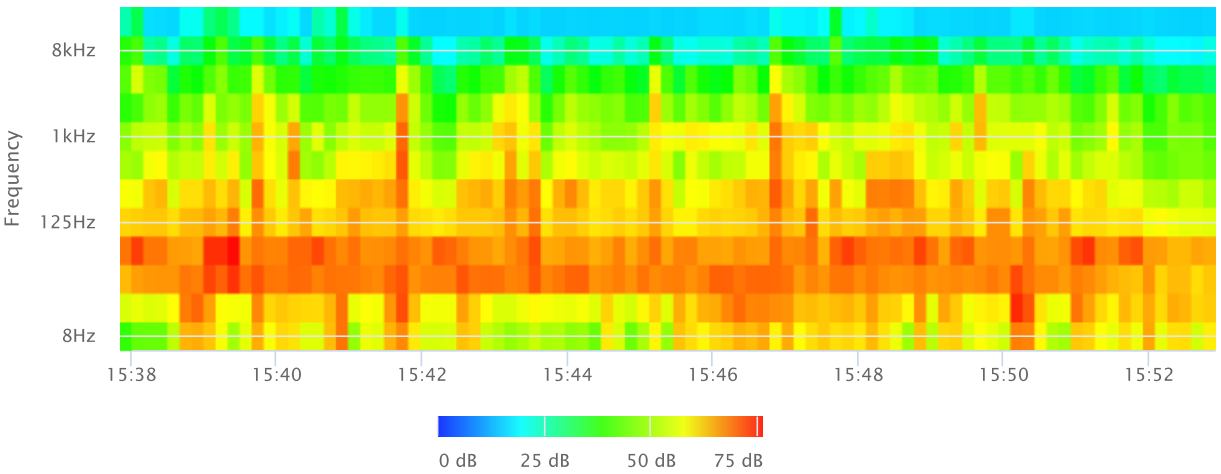
Time History



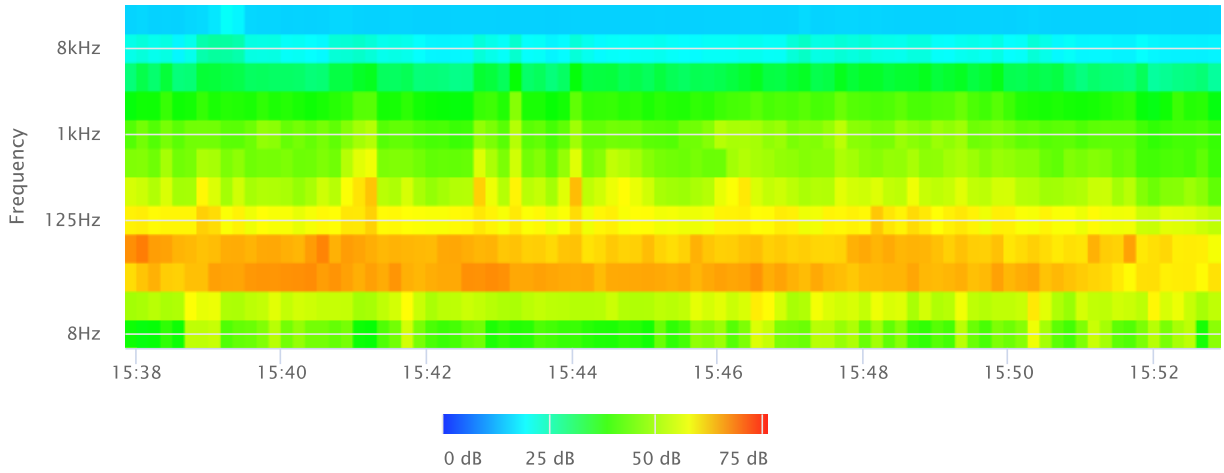
OBA 1/1 Leq



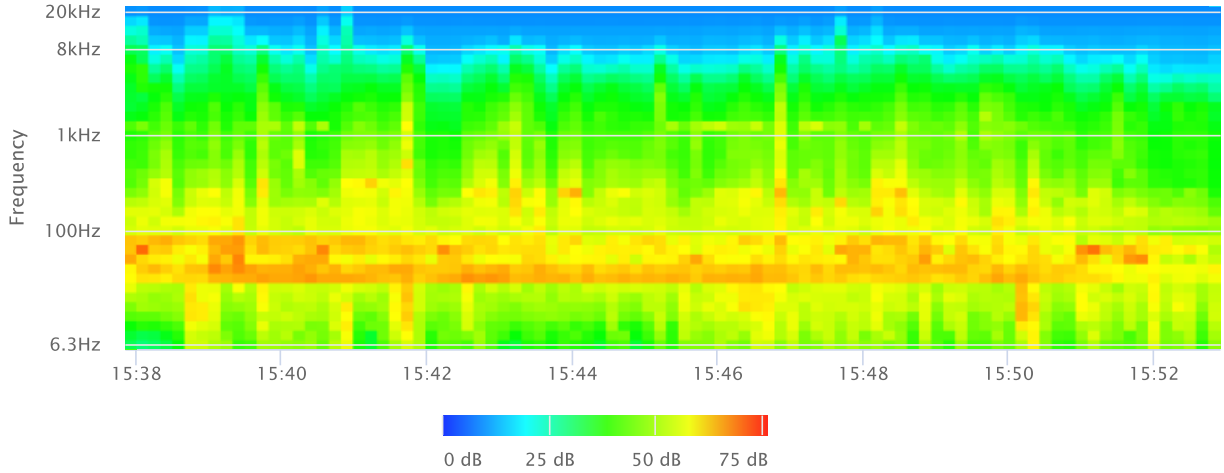
OBA 1/1 Lmax



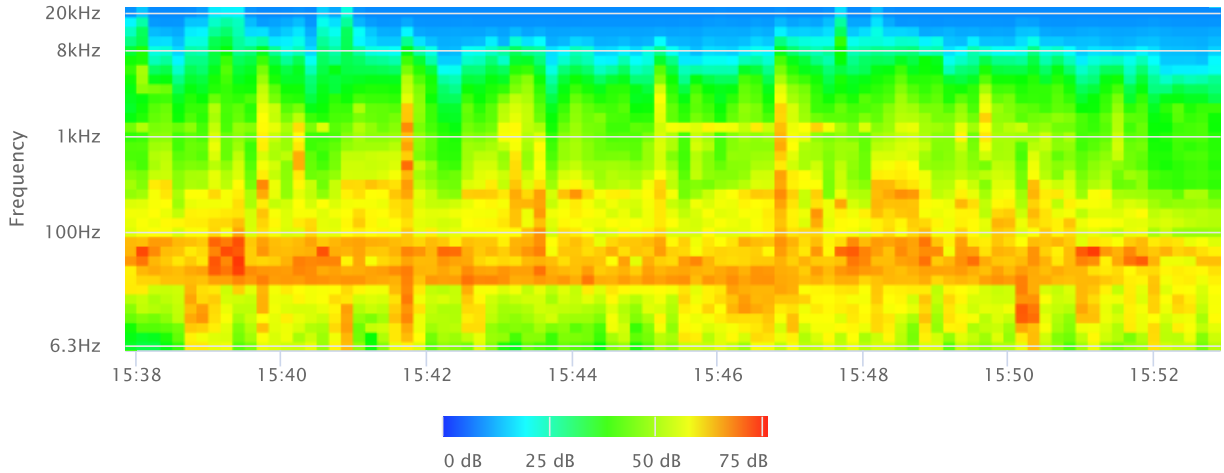
OBA 1/1 Lmin



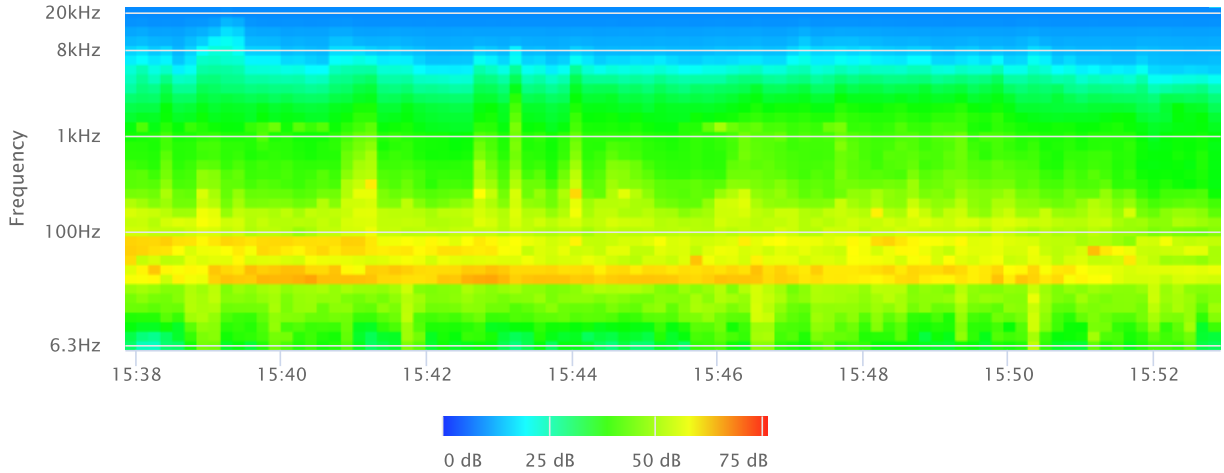
OBA 1/3 Leq



OBA 1/3 Lmax



OBA 1/3 Lmin


20kHz
8kHz
1kHz
100Hz
6.3Hz
Frequency
15:38
15:40
15:42
15:44
15:46
15:48
15:50
15:52
0 dB
25 dB
50 dB
75 dB

APPENDIX D

CONSTRUCTION NOISE MODELING

Receptor - Church to North (Emmanuel Temple CME, 17288 Stoddard Wells Road, Victorville)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	195	20	0.20	-11.8	-7.0	78.2	71.2
Excavators	2	81	195	40	0.80	-11.8	-1.0	69.2	68.2
Rubber Tired Dozers	2	82	195	40	0.80	-11.8	-1.0	70.2	69.2
								Log Sum	74.5
Site Preparation									
Tractors/Loaders/Backhoes	4	84	195	40	1.60	-11.8	2.0	72.2	74.2
Rubber Tired Dozers	3	82	195	40	1.20	-11.8	0.8	70.2	71.0
								Log Sum	75.9
Grading									
Excavators	1	81	195	40	0.4	-11.8	-4.0	69.2	65.2
Rubber Tired Dozers	1	82	195	40	0.40	-11.8	-4.0	70.2	66.2
Tractors/Loaders/Backhoes	3	84	195	40	1.20	-11.8	0.8	72.2	73.0
Graders	1	85	195	40	0.40	-11.8	-4.0	73.2	69.2
								Log Sum	75.5
Building Construction									
Cranes	1	81	195	16	0.16	-11.8	-8.0	69.2	61.2
Forklifts[2]	3	48	195	40	1.20	-11.8	0.8	36.2	37.0
Generator Sets	1	81	195	50	0.50	-11.8	-3.0	69.2	66.2
Welders	1	74	195	40	0.40	-11.8	-4.0	62.2	58.2
Tractors/Loaders/Backhoes	3	84	195	40	1.20	-11.8	0.8	72.2	73.0
								Log Sum	74.1
Paving									
Pavers	1	77	195	50	0.50	-11.8	-3.0	65.2	62.2
Paving Equipment	1	77	195	50	0.50	-11.8	-3.0	65.2	62.2
Rollers	1	80	195	20	0.20	-11.8	-7.0	68.2	61.2
								Log Sum	66.6
Architectural Coating									
Air Compressors	1	78	195	40	0.40	-11.8	-4.0	66.2	62.2
								Log Sum	62.2

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 Northeast (117316 Jupiter Avenue, Victorville)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	1166	20	0.20	-27.4	-7.0	62.6	55.7
Excavators	2	81	1166	40	0.80	-27.4	-1.0	53.6	52.7
Rubber Tired Dozers	2	82	1166	40	0.80	-27.4	-1.0	54.6	53.7
								Log Sum	59.0
Site Preparation									
Tractors/Loaders/Backhoes	4	84	1166	40	1.60	-27.4	2.0	56.6	58.7
Rubber Tired Dozers	3	82	1166	40	1.20	-27.4	0.8	54.6	55.4
								Log Sum	60.4
Grading									
Excavators	1	81	1166	40	0.4	-27.4	-4.0	53.6	49.7
Rubber Tired Dozers	1	82	1166	40	0.40	-27.4	-4.0	54.6	50.7
Tractors/Loaders/Backhoes	3	84	1166	40	1.20	-27.4	0.8	56.6	57.4
Graders	1	85	1166	40	0.40	-27.4	-4.0	57.6	53.7
								Log Sum	60.0
Building Construction									
Cranes	1	81	1166	16	0.16	-27.4	-8.0	53.6	45.7
Forklifts[2]	3	48	1166	40	1.20	-27.4	0.8	20.6	21.4
Generator Sets	1	81	1166	50	0.50	-27.4	-3.0	53.6	50.6
Welders	1	74	1166	40	0.40	-27.4	-4.0	46.6	42.7
Tractors/Loaders/Backhoes	3	84	1166	40	1.20	-27.4	0.8	56.6	57.4
								Log Sum	58.6
Paving									
Pavers	1	77	1166	50	0.50	-27.4	-3.0	49.6	46.6
Paving Equipment	1	77	1166	50	0.50	-27.4	-3.0	49.6	46.6
Rollers	1	80	1166	20	0.20	-27.4	-7.0	52.6	45.7
								Log Sum	51.1
Architectural Coating									
Air Compressors	1	78	1166	40	0.40	-27.4	-4.0	50.6	46.7
								Log Sum	46.7

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).

Receptor - Residential to Northeast (Northgate Village Apartments, 17251 Dante Street, Victorville)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	1680	20	0.20	-30.5	-7.0	59.5	52.5
Excavators	2	81	1680	40	0.80	-30.5	-1.0	50.5	49.5
Rubber Tired Dozers	2	82	1680	40	0.80	-30.5	-1.0	51.5	50.5
								Log Sum	55.8
Site Preparation									
Tractors/Loaders/Backhoes	4	84	1680	40	1.60	-30.5	2.0	53.5	55.5
Rubber Tired Dozers	3	82	1680	40	1.20	-30.5	0.8	51.5	52.3
								Log Sum	57.2
Grading									
Excavators	1	81	1680	40	0.4	-30.5	-4.0	50.5	46.5
Rubber Tired Dozers	1	82	1680	40	0.40	-30.5	-4.0	51.5	47.5
Tractors/Loaders/Backhoes	3	84	1680	40	1.20	-30.5	0.8	53.5	54.3
Graders	1	85	1680	40	0.40	-30.5	-4.0	54.5	50.5
								Log Sum	56.8
Building Construction									
Cranes	1	81	1680	16	0.16	-30.5	-8.0	50.5	42.5
Forklifts[2]	3	48	1680	40	1.20	-30.5	0.8	17.5	18.3
Generator Sets	1	81	1680	50	0.50	-30.5	-3.0	50.5	47.5
Welders	1	74	1680	40	0.40	-30.5	-4.0	43.5	39.5
Tractors/Loaders/Backhoes	3	84	1680	40	1.20	-30.5	0.8	53.5	54.3
								Log Sum	55.4
Paving									
Pavers	1	77	1680	50	0.50	-30.5	-3.0	46.5	43.5
Paving Equipment	1	77	1680	50	0.50	-30.5	-3.0	46.5	43.5
Rollers	1	80	1680	20	0.20	-30.5	-7.0	49.5	42.5
								Log Sum	47.9
Architectural Coating									
Air Compressors	1	78	1680	40	0.40	-30.5	-4.0	47.5	43.5
								Log Sum	43.5

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 - Park to East (Grady Trammel Park , 17184 Stoddard Wells Road, Victorville)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	340	20	0.20	-16.7	-7.0	73.3	66.4
Excavators	2	81	340	40	0.80	-16.7	-1.0	64.3	63.4
Rubber Tired Dozers	2	82	340	40	0.80	-16.7	-1.0	65.3	64.4
								Log Sum	69.7
Site Preparation									
Tractors/Loaders/Backhoes	4	84	340	40	1.60	-16.7	2.0	67.3	69.4
Rubber Tired Dozers	3	82	340	40	1.20	-16.7	0.8	65.3	66.1
								Log Sum	71.1
Grading									
Excavators	1	81	340	40	0.4	-16.7	-4.0	64.3	60.4
Rubber Tired Dozers	1	82	340	40	0.40	-16.7	-4.0	65.3	61.4
Tractors/Loaders/Backhoes	3	84	340	40	1.20	-16.7	0.8	67.3	68.1
Graders	1	85	340	40	0.40	-16.7	-4.0	68.3	64.4
								Log Sum	70.7
Building Construction									
Cranes	1	81	340	16	0.16	-16.7	-8.0	64.3	56.4
Forklifts[2]	3	48	340	40	1.20	-16.7	0.8	31.3	32.1
Generator Sets	1	81	340	50	0.50	-16.7	-3.0	64.3	61.3
Welders	1	74	340	40	0.40	-16.7	-4.0	57.3	53.4
Tractors/Loaders/Backhoes	3	84	340	40	1.20	-16.7	0.8	67.3	68.1
								Log Sum	69.3
Paving									
Pavers	1	77	340	50	0.50	-16.7	-3.0	60.3	57.3
Paving Equipment	1	77	340	50	0.50	-16.7	-3.0	60.3	57.3
Rollers	1	80	340	20	0.20	-16.7	-7.0	63.3	56.4
								Log Sum	61.8
Architectural Coating									
Air Compressors	1	78	340	40	0.40	-16.7	-4.0	61.3	57.4
								Log Sum	57.4

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 - Industrial to East (AVCO/Victorville/Burrtec Industries, 17080 Stoddard Wells Road, Victorville)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	348	20	0.20	-16.9	-7.0	73.1	66.2
Excavators	2	81	348	40	0.80	-16.9	-1.0	64.1	63.2
Rubber Tired Dozers	2	82	348	40	0.80	-16.9	-1.0	65.1	64.2
								Log Sum	69.5
Site Preparation									
Tractors/Loaders/Backhoes	4	84	348	40	1.60	-16.9	2.0	67.1	69.2
Rubber Tired Dozers	3	82	348	40	1.20	-16.9	0.8	65.1	65.9
								Log Sum	70.9
Grading									
Excavators	1	81	348	40	0.4	-16.9	-4.0	64.1	60.2
Rubber Tired Dozers	1	82	348	40	0.40	-16.9	-4.0	65.1	61.2
Tractors/Loaders/Backhoes	3	84	348	40	1.20	-16.9	0.8	67.1	67.9
Graders	1	85	348	40	0.40	-16.9	-4.0	68.1	64.2
								Log Sum	70.5
Building Construction									
Cranes	1	81	348	16	0.16	-16.9	-8.0	64.1	56.2
Forklifts[2]	3	48	348	40	1.20	-16.9	0.8	31.1	31.9
Generator Sets	1	81	348	50	0.50	-16.9	-3.0	64.1	61.1
Welders	1	74	348	40	0.40	-16.9	-4.0	57.1	53.2
Tractors/Loaders/Backhoes	3	84	348	40	1.20	-16.9	0.8	67.1	67.9
								Log Sum	69.1
Paving									
Pavers	1	77	348	50	0.50	-16.9	-3.0	60.1	57.1
Paving Equipment	1	77	348	50	0.50	-16.9	-3.0	60.1	57.1
Rollers	1	80	348	20	0.20	-16.9	-7.0	63.1	56.2
								Log Sum	61.6
Architectural Coating									
Air Compressors	1	78	348	40	0.40	-16.9	-4.0	61.1	57.2
								Log Sum	57.2

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 Southeast (16992 Abbey Lane, Victorville)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	248	20	0.20	-13.9	-7.0	76.1	69.1
Excavators	2	81	248	40	0.80	-13.9	-1.0	67.1	66.1
Rubber Tired Dozers	2	82	248	40	0.80	-13.9	-1.0	68.1	67.1
								Log Sum	72.4
Site Preparation									
Tractors/Loaders/Backhoes	4	84	248	40	1.60	-13.9	2.0	70.1	72.1
Rubber Tired Dozers	3	82	248	40	1.20	-13.9	0.8	68.1	68.9
								Log Sum	73.8
Grading									
Excavators	1	81	248	40	0.4	-13.9	-4.0	67.1	63.1
Rubber Tired Dozers	1	82	248	40	0.40	-13.9	-4.0	68.1	64.1
Tractors/Loaders/Backhoes	3	84	248	40	1.20	-13.9	0.8	70.1	70.9
Graders	1	85	248	40	0.40	-13.9	-4.0	71.1	67.1
								Log Sum	73.4
Building Construction									
Cranes	1	81	248	16	0.16	-13.9	-8.0	67.1	59.1
Forklifts[2]	3	48	248	40	1.20	-13.9	0.8	34.1	34.9
Generator Sets	1	81	248	50	0.50	-13.9	-3.0	67.1	64.1
Welders	1	74	248	40	0.40	-13.9	-4.0	60.1	56.1
Tractors/Loaders/Backhoes	3	84	248	40	1.20	-13.9	0.8	70.1	70.9
								Log Sum	72.1
Paving									
Pavers	1	77	248	50	0.50	-13.9	-3.0	63.1	60.1
Paving Equipment	1	77	248	50	0.50	-13.9	-3.0	63.1	60.1
Rollers	1	80	248	20	0.20	-13.9	-7.0	66.1	59.1
								Log Sum	64.5
Architectural Coating									
Air Compressors	1	78	248	40	0.40	-13.9	-4.0	64.1	60.1
								Log Sum	60.1

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 - Church to Southeast (Spirit of Christ Tabernacle, 17111 Stoddard Wells Road, Victorville)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	1092	20	0.20	-26.8	-7.0	63.2	56.2
Excavators	2	81	1092	40	0.80	-26.8	-1.0	54.2	53.2
Rubber Tired Dozers	2	82	1092	40	0.80	-26.8	-1.0	55.2	54.2
								Log Sum	59.5
Site Preparation									
Tractors/Loaders/Backhoes	4	84	1092	40	1.60	-26.8	2.0	57.2	59.3
Rubber Tired Dozers	3	82	1092	40	1.20	-26.8	0.8	55.2	56.0
								Log Sum	60.9
Grading									
Excavators	1	81	1092	40	0.4	-26.8	-4.0	54.2	50.2
Rubber Tired Dozers	1	82	1092	40	0.40	-26.8	-4.0	55.2	51.2
Tractors/Loaders/Backhoes	3	84	1092	40	1.20	-26.8	0.8	57.2	58.0
Graders	1	85	1092	40	0.40	-26.8	-4.0	58.2	54.2
								Log Sum	60.6
Building Construction									
Cranes	1	81	1092	16	0.16	-26.8	-8.0	54.2	46.3
Forklifts[2]	3	48	1092	40	1.20	-26.8	0.8	21.2	22.0
Generator Sets	1	81	1092	50	0.50	-26.8	-3.0	54.2	51.2
Welders	1	74	1092	40	0.40	-26.8	-4.0	47.2	43.2
Tractors/Loaders/Backhoes	3	84	1092	40	1.20	-26.8	0.8	57.2	58.0
								Log Sum	59.2
Paving									
Pavers	1	77	1092	50	0.50	-26.8	-3.0	50.2	47.2
Paving Equipment	1	77	1092	50	0.50	-26.8	-3.0	50.2	47.2
Rollers	1	80	1092	20	0.20	-26.8	-7.0	53.2	46.2
								Log Sum	51.7
Architectural Coating									
Air Compressors	1	78	1092	40	0.40	-26.8	-4.0	51.2	47.2
								Log Sum	47.2

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 - Transient Lodging to Southeast (16959 Stoddard Wells Road, Victorville)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	1979	20	0.20	-31.9	-7.0	58.1	51.1
Excavators	2	81	1979	40	0.80	-31.9	-1.0	49.1	48.1
Rubber Tired Dozers	2	82	1979	40	0.80	-31.9	-1.0	50.1	49.1
								Log Sum	54.4
Site Preparation									
Tractors/Loaders/Backhoes	4	84	1979	40	1.60	-31.9	2.0	52.1	54.1
Rubber Tired Dozers	3	82	1979	40	1.20	-31.9	0.8	50.1	50.8
								Log Sum	55.8
Grading									
Excavators	1	81	1979	40	0.4	-31.9	-4.0	49.1	45.1
Rubber Tired Dozers	1	82	1979	40	0.40	-31.9	-4.0	50.1	46.1
Tractors/Loaders/Backhoes	3	84	1979	40	1.20	-31.9	0.8	52.1	52.8
Graders	1	85	1979	40	0.40	-31.9	-4.0	53.1	49.1
								Log Sum	55.4
Building Construction									
Cranes	1	81	1979	16	0.16	-31.9	-8.0	49.1	41.1
Forklifts[2]	3	48	1979	40	1.20	-31.9	0.8	16.1	16.8
Generator Sets	1	81	1979	50	0.50	-31.9	-3.0	49.1	46.0
Welders	1	74	1979	40	0.40	-31.9	-4.0	42.1	38.1
Tractors/Loaders/Backhoes	3	84	1979	40	1.20	-31.9	0.8	52.1	52.8
								Log Sum	54.0
Paving									
Pavers	1	77	1979	50	0.50	-31.9	-3.0	45.1	42.0
Paving Equipment	1	77	1979	50	0.50	-31.9	-3.0	45.1	42.0
Rollers	1	80	1979	20	0.20	-31.9	-7.0	48.1	41.1
								Log Sum	46.5
Architectural Coating									
Air Compressors	1	78	1979	40	0.40	-31.9	-4.0	46.1	42.1
								Log Sum	42.1

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 - Industrial to West (Burrtec Waste, 17000 E Abbey Lane, Victorville)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	376	20	0.20	-17.5	-7.0	72.5	65.5
Excavators	2	81	376	40	0.80	-17.5	-1.0	63.5	62.5
Rubber Tired Dozers	2	82	376	40	0.80	-17.5	-1.0	64.5	63.5
								Log Sum	68.8
Site Preparation									
Tractors/Loaders/Backhoes	4	84	376	40	1.60	-17.5	2.0	66.5	68.5
Rubber Tired Dozers	3	82	376	40	1.20	-17.5	0.8	64.5	65.3
								Log Sum	70.2
Grading									
Excavators	1	81	376	40	0.4	-17.5	-4.0	63.5	59.5
Rubber Tired Dozers	1	82	376	40	0.40	-17.5	-4.0	64.5	60.5
Tractors/Loaders/Backhoes	3	84	376	40	1.20	-17.5	0.8	66.5	67.3
Graders	1	85	376	40	0.40	-17.5	-4.0	67.5	63.5
								Log Sum	69.8
Building Construction									
Cranes	1	81	376	16	0.16	-17.5	-8.0	63.5	55.5
Forklifts[2]	3	48	376	40	1.20	-17.5	0.8	30.5	31.3
Generator Sets	1	81	376	50	0.50	-17.5	-3.0	63.5	60.5
Welders	1	74	376	40	0.40	-17.5	-4.0	56.5	52.5
Tractors/Loaders/Backhoes	3	84	376	40	1.20	-17.5	0.8	66.5	67.3
								Log Sum	68.4
Paving									
Pavers	1	77	376	50	0.50	-17.5	-3.0	59.5	56.5
Paving Equipment	1	77	376	50	0.50	-17.5	-3.0	59.5	56.5
Rollers	1	80	376	20	0.20	-17.5	-7.0	62.5	55.5
								Log Sum	60.9
Architectural Coating									
Air Compressors	1	78	376	40	0.40	-17.5	-4.0	60.5	56.5
								Log Sum	56.5

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 - Industrial to Southwest (16993 Abbey Lane, Victorville)

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	575	20	0.20	-21.2	-7.0	68.8	61.8
Excavators	2	81	575	40	0.80	-21.2	-1.0	59.8	58.8
Rubber Tired Dozers	2	82	575	40	0.80	-21.2	-1.0	60.8	59.8
								Log Sum	65.1
Site Preparation									
Tractors/Loaders/Backhoes	4	84	575	40	1.60	-21.2	2.0	62.8	64.8
Rubber Tired Dozers	3	82	575	40	1.20	-21.2	0.8	60.8	61.6
								Log Sum	66.5
Grading									
Excavators	1	81	575	40	0.4	-21.2	-4.0	59.8	55.8
Rubber Tired Dozers	1	82	575	40	0.40	-21.2	-4.0	60.8	56.8
Tractors/Loaders/Backhoes	3	84	575	40	1.20	-21.2	0.8	62.8	63.6
Graders	1	85	575	40	0.40	-21.2	-4.0	63.8	59.8
								Log Sum	66.1
Building Construction									
Cranes	1	81	575	16	0.16	-21.2	-8.0	59.8	51.8
Forklifts[2]	3	48	575	40	1.20	-21.2	0.8	26.8	27.6
Generator Sets	1	81	575	50	0.50	-21.2	-3.0	59.8	56.8
Welders	1	74	575	40	0.40	-21.2	-4.0	52.8	48.8
Tractors/Loaders/Backhoes	3	84	575	40	1.20	-21.2	0.8	62.8	63.6
								Log Sum	64.7
Paving									
Pavers	1	77	575	50	0.50	-21.2	-3.0	55.8	52.8
Paving Equipment	1	77	575	50	0.50	-21.2	-3.0	55.8	52.8
Rollers	1	80	575	20	0.20	-21.2	-7.0	58.8	51.8
								Log Sum	57.2
Architectural Coating									
Air Compressors	1	78	575	40	0.40	-21.2	-4.0	56.8	52.8
								Log Sum	52.8

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).

Existing Traffic Noise

1	:Id	Vehicle Distribution (Light Truck Mix)				ADT	400
E Abbey Lane (Bimin Street)	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	25
North of Abbey Lane	:Segment	Automobiles	75.56	13.96	10.49	97.40	Distance	30
		Medium Trucks	48.91	2.17	48.91	1.84	Left Angle	-90
		Heavy Trucks	47.30	5.41	47.30	0.74	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	24.53	0.30	0.12	18.13	0.05	0.05	4.54	0.40	0.16
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	9.61	-9.51	-13.62	8.30	-17.02	-17.01	2.29	-8.26	-12.37
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	46.20	38.72	40.77	44.89	31.21	37.38	38.87	39.97	42.02
	DAY LEQ	47.86		EVENING LEQ	45.75		NIGHT LEQ	45.26	

F		CNEL	52.34	Day hour	89.00
		DAY LEQ	47.86	Absorptive?	no
				Use hour?	no
				GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Plus Project Traffic Noise

1	:Id	
E Abbey Lane (Bimin Street)	:Road	
North of Abbey Lane	:Segment	

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	539
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	33.06	0.40	0.16	24.43	0.07	0.07	6.12	0.54	0.21
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	10.91	-8.22	-12.32	9.59	-15.73	-15.72	3.58	-6.97	-11.07
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	47.50	40.02	42.07	46.18	32.51	38.67	40.17	41.27	43.32
	DAY LEQ	49.16		EVENING LEQ	47.05		NIGHT LEQ	46.56	

CNEL	53.63
DAY LEQ	49.16

Day hour	89.00
Absorptive?	no
Use hour?	no
GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Traffic Noise

2	:Id
Abbey Lane	:Road
West of E Abbey Lane (Bimin Street)	:Segment

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	200
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	12.27	0.15	0.06	9.06	0.03	0.03	2.27	0.20	0.08
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	6.60	-12.52	-16.63	5.29	-20.03	-20.02	-0.72	-11.28	-15.38
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	43.19	35.71	37.76	41.88	28.20	34.37	35.86	36.96	39.01
	DAY LEQ	44.85		EVENING LEQ	42.74		NIGHT LEQ	42.25	

CNEL	49.33
DAY LEQ	44.85

Day hour	90.00
Absorptive?	no
Use hour?	no
GRADE dB	1.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Plus Project Traffic Noise

2	:Id
Abbey Lane	:Road
West of E Abbey Lane (Bimin Street)	:Segment

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	339
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	20.79	0.25	0.10	15.36	0.05	0.05	3.85	0.34	0.13
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	8.89	-10.23	-14.33	7.58	-17.74	-17.73	1.57	-8.98	-13.08
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	45.48	38.00	40.05	44.17	30.49	36.66	38.16	39.25	41.30
	DAY LEQ	47.14		EVENING LEQ	45.03		NIGHT LEQ	44.54	

CNEL	51.62
DAY LEQ	47.14

Day hour	90.00
Absorptive?	no
Use hour?	no
GRADE dB	1.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Traffic Noise

3	:Id
Abbey Lane	:Road
East of E Abbey Lane (Bimin Street)	:Segment

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	700
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	42.93	0.52	0.20	31.73	0.09	0.09	7.95	0.70	0.27
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	12.04	-7.08	-11.19	10.73	-14.59	-14.58	4.72	-5.83	-9.94
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	48.63	41.15	43.20	47.32	33.64	39.81	41.31	42.40	44.45
	DAY LEQ	50.29		EVENING LEQ	48.18		NIGHT LEQ	47.69	

CNEL	54.77
DAY LEQ	50.29

Day hour	91.00
Absorptive?	no
Use hour?	no
GRADE dB	2.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Plus Project Traffic Noise

3	:Id
Abbey Lane	:Road
East of E Abbey Lane (Bimin Street)	:Segment

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	839
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	51.46	0.63	0.24	38.03	0.11	0.11	9.52	0.84	0.33
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	12.83	-6.30	-10.40	11.52	-13.81	-13.79	5.50	-5.05	-9.15
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	49.42	41.94	43.99	48.10	34.43	40.59	42.09	43.19	45.24
	DAY LEQ	51.08		EVENING LEQ	48.97		NIGHT LEQ	48.48	

CNEL	55.56
DAY LEQ	51.08

Day hour	91.00
Absorptive?	no
Use hour?	no
GRADE dB	2.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Traffic Noise

4	:Id
Abbey Lane	:Road
West of Stoddard Wells Road	:Segment

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	700
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	42.93	0.52	0.20	31.73	0.09	0.09	7.95	0.70	0.27
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	12.04	-7.08	-11.19	10.73	-14.59	-14.58	4.72	-5.83	-9.94
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	48.63	41.15	43.20	47.32	33.64	39.81	41.31	42.40	44.45
	DAY LEQ	50.29		EVENING LEQ	48.18		NIGHT LEQ	47.69	

CNEL	54.77
DAY LEQ	50.29

Day hour	92.00
Absorptive?	no
Use hour?	no
GRADE dB	3.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Plus Project Traffic Noise

4	:Id
Abbey Lane	:Road
West of Stoddard Wells Road	:Segment

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	839
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	51.46	0.63	0.24	38.03	0.11	0.11	9.52	0.84	0.33
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	12.83	-6.30	-10.40	11.52	-13.81	-13.79	5.50	-5.05	-9.15
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	49.42	41.94	43.99	48.10	34.43	40.59	42.09	43.19	45.24
	DAY LEQ	51.08		EVENING LEQ	48.97		NIGHT LEQ	48.48	

CNEL	55.56
DAY LEQ	51.08

Day hour	92.00
Absorptive?	no
Use hour?	no
GRADE dB	3.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Traffic Noise

5	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	3000
Stoddard Wells Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	45
South of Abbey Lane	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	64
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	173.74	3.60	6.00	128.98	0.60	1.00	31.99	5.00	8.33
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
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	15.56	-1.27	0.94	14.27	-9.06	-6.84	8.21	0.15	2.37
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	58.76	50.21	56.94	57.47	42.42	49.16	51.41	51.63	58.37
	DAY LEQ	61.31		EVENING LEQ	58.18		NIGHT LEQ	59.87	

CNEL	66.61	Day hour	93.00
DAY LEQ	61.31	Absorptive?	no
		Use hour?	no
		GRADE dB	4.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise

5	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	3139
Stoddard Wells Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	45
South of Abbey Lane	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance	64
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle	-90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	181.79	3.77	6.28	134.96	0.63	1.05	33.47	5.23	8.72
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
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	15.76	-1.08	1.14	14.46	-8.86	-6.64	8.41	0.35	2.57
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	58.96	50.40	57.14	57.67	42.62	49.36	51.61	51.83	58.57
	DAY LEQ	61.51		EVENING LEQ	58.38		NIGHT LEQ	60.07	

CNEL	66.80	Day hour	93.00
DAY LEQ	61.51	Absorptive?	no
		Use hour?	no
		GRADE dB	4.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Traffic Noise

6	:Id	Vehicle Distribution (Heavy Truck Mix)				ADT	2700
Stoddard Wells Road	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed 45
North of Abbey Lane	:Segment	Automobiles	75.54	14.02	10.43	92.00	Distance 64
		Medium Trucks	48.00	2.00	50.00	3.00	Left Angle -90
		Heavy Trucks	48.00	2.00	50.00	5.00	Right Angle 90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	156.37	3.24	5.40	116.09	0.54	0.90	28.79	4.50	7.50
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
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	15.10	-1.73	0.49	13.81	-9.51	-7.30	7.75	-0.31	1.91
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	58.31	49.75	56.49	57.01	41.97	48.70	50.96	51.17	57.91
	DAY LEQ	60.85		EVENING LEQ	57.73		NIGHT LEQ	59.42	

CNEL	66.15	Day hour	94.00
DAY LEQ	60.85	Absorptive?	no
		Use hour?	no
		GRADE dB	5.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise

6	:Id	
Stoddard Wells Road	:Road	
North of Abbey Lane	:Segment	

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	2839
Speed	45
Distance	64
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	164.42	3.41	5.68	122.06	0.57	0.95	30.27	4.73	7.89
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
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	15.32	-1.51	0.70	14.03	-9.30	-7.08	7.97	-0.09	2.13
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	58.52	49.97	56.70	57.23	42.18	48.92	51.17	51.39	58.13
	DAY LEQ	61.07		EVENING LEQ	57.95		NIGHT LEQ	59.63	

CNEL	66.37
DAY LEQ	61.07

Day hour	94.00
Absorptive?	no
Use hour?	no
GRADE dB	5.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

APPENDIX E

SOUNDPLAN INPUT AND OUTPUT

Noise emissions of industry sources

Source name	Reference	Level		Frequency spectrum [dB(A)]										Corrections		
				31	63	125	250	500	1	2	4	8	16	Cwall	CI	CT
			dB(A)	Hz	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz	kHz	dB	dB	dB
Conveyor	Lw/unit	Day	76.8	-	44.8	52.9	59.4	67.8	75.0	68.2	64.0	55.9	-	-	-	-
Excavator	Lw/unit	Day	85.0	-	55.8	61.9	73.4	77.8	81.0	79.2	73.0	62.9	-	-	-	-
Loader	Lw/unit	Day	81.8	-	65.8	67.9	74.4	73.8	76.0	75.2	72.0	60.9	-	-	-	-
Bobcat	Lw/unit	Day	79.8	-	57.8	71.9	72.4	70.8	74.0	72.2	67.0	63.9	-	-	-	-
Roll Off Truck	Lw/unit	Day	84.5	-	61.8	65.9	68.4	75.8	80.0	80.2	74.0	65.9	-	-	-	-
Loader	Lw/unit	Day	81.8	-	65.8	67.9	74.4	73.8	76.0	75.2	72.0	60.9	-	-	-	-
HVAC	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	-	-	-
	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	-	-	-
	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	-	-	-
	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
			Day	Evening	Night			dB(A)
Parking	Visitors and staff	26 Parking bays	0.300	0.000	0.000	Asphaltic driving lanes	no	80.2
Parking	Visitors and staff	8 Parking bays	0.300	0.000	0.000	Asphaltic driving lanes	no	72.0

Receiver list

No.	Receiver name	Building side	Floor	Limit Day dB(A)	Level Day dB(A)	Conflict Day dB
1	2	-	EG	-	38.9	-
2		-	EG	-	33.3	-
3	3	-	EG	-	38.4	-
4	4	-	EG	-	34.1	-
5	5	-	EG	-	56.3	-
6	6	-	EG	-	48.6	-
7	7	-	EG	-	35.1	-
8	8	-	EG	-	43.8	-
9	9	-	EG	-	51.0	-

APPENDIX F

FHWA WORKSHEETS

Existing Traffic Noise

1	:Id	Vehicle Distribution (Light Truck Mix)				ADT	400
E Abbey Lane (Bimin Street)	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	25
North of Abbey Lane	:Segment	Automobiles	75.56	13.96	10.49	97.40	Distance	30
		Medium Trucks	48.91	2.17	48.91	1.84	Left Angle	-90
		Heavy Trucks	47.30	5.41	47.30	0.74	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	24.53	0.30	0.12	18.13	0.05	0.05	4.54	0.40	0.16
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	9.61	-9.51	-13.62	8.30	-17.02	-17.01	2.29	-8.26	-12.37
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	46.20	38.72	40.77	44.89	31.21	37.38	38.87	39.97	42.02
	DAY LEQ	47.86		EVENING LEQ	45.75		NIGHT LEQ	45.26	

F	CNEL	52.34	Day hour	89.00
	DAY LEQ	47.86	Absorptive?	no
			Use hour?	no
			GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Plus Project Traffic Noise

1	:Id	Vehicle Distribution (Light Truck Mix)				ADT	540
		Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	
E Abbey Lane (Bimin Street)	:Road					Speed	25
		Automobiles	75.56	13.96	10.49	97.40	Distance	30
North of Abbey Lane	:Segment	Medium Trucks	48.91	2.17	48.91	1.84	Left Angle	-90
		Heavy Trucks	47.30	5.41	47.30	0.74	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	33.12	0.40	0.16	24.47	0.07	0.07	6.13	0.54	0.21
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	10.92	-8.21	-12.31	9.60	-15.72	-15.71	3.59	-6.96	-11.06
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	47.50	40.02	42.08	46.19	32.52	38.68	40.18	41.27	43.33
	DAY LEQ	49.16		EVENING LEQ	47.06		NIGHT LEQ	46.56	

CNEL	53.64	Day hour	89.00
DAY LEQ	49.16	Absorptive?	no
		Use hour?	no
		GRADE dB	0.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Traffic Noise

2	:Id
Abbey Lane	:Road
West of E Abbey Lane (Bimin Street)	:Segment

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	200
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	12.27	0.15	0.06	9.06	0.03	0.03	2.27	0.20	0.08
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	6.60	-12.52	-16.63	5.29	-20.03	-20.02	-0.72	-11.28	-15.38
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	43.19	35.71	37.76	41.88	28.20	34.37	35.86	36.96	39.01
	DAY LEQ	44.85		EVENING LEQ	42.74		NIGHT LEQ	42.25	

CNEL	49.33
DAY LEQ	44.85

Day hour	90.00
Absorptive?	no
Use hour?	no
GRADE dB	1.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Plus Project Traffic Noise

2	:Id
Abbey Lane	:Road
West of E Abbey Lane (Bimin Street)	:Segment

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	300
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	18.40	0.22	0.09	13.60	0.04	0.04	3.41	0.30	0.12
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	8.36	-10.76	-14.86	7.05	-18.27	-18.26	1.04	-9.51	-13.62
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	44.95	37.47	39.52	43.64	29.96	36.13	37.63	38.72	40.77
	DAY LEQ	46.61		EVENING LEQ	44.50		NIGHT LEQ	44.01	

CNEL	51.09
DAY LEQ	46.61

Day hour	90.00
Absorptive?	no
Use hour?	no
GRADE dB	1.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Traffic Noise

3	:Id
Abbey Lane	:Road
East of E Abbey Lane (Bimin Street)	:Segment

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	700
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	42.93	0.52	0.20	31.73	0.09	0.09	7.95	0.70	0.27
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	12.04	-7.08	-11.19	10.73	-14.59	-14.58	4.72	-5.83	-9.94
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	48.63	41.15	43.20	47.32	33.64	39.81	41.31	42.40	44.45
	DAY LEQ	50.29		EVENING LEQ	48.18		NIGHT LEQ	47.69	

CNEL	54.77
DAY LEQ	50.29

Day hour	91.00
Absorptive?	no
Use hour?	no
GRADE dB	2.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Plus Project Traffic Noise

3	:Id
Abbey Lane	:Road
East of E Abbey Lane (Bimin Street)	:Segment

Vehicle Distribution (Light Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.56	13.96	10.49	97.40
Medium Trucks	48.91	2.17	48.91	1.84
Heavy Trucks	47.30	5.41	47.30	0.74

ADT	870
Speed	25
Distance	30
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	53.36	0.65	0.25	39.43	0.12	0.12	9.88	0.87	0.34
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	12.99	-6.14	-10.24	11.67	-13.65	-13.64	5.66	-4.89	-8.99
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	49.58	42.10	44.15	48.26	34.59	40.75	42.25	43.35	45.40
	DAY LEQ	51.23		EVENING LEQ	49.13		NIGHT LEQ	48.64	

CNEL	55.71
DAY LEQ	51.23

Day hour	91.00
Absorptive?	no
Use hour?	no
GRADE dB	2.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Traffic Noise

4	:Id	Vehicle Distribution (Light Truck Mix)				ADT	700
Abbey Lane	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	25
West of Stoddard Wells Road	:Segment	Automobiles	75.56	13.96	10.49	97.40	Distance	30
		Medium Trucks	48.91	2.17	48.91	1.84	Left Angle	-90
		Heavy Trucks	47.30	5.41	47.30	0.74	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	42.93	0.52	0.20	31.73	0.09	0.09	7.95	0.70	0.27
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	12.04	-7.08	-11.19	10.73	-14.59	-14.58	4.72	-5.83	-9.94
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	48.63	41.15	43.20	47.32	33.64	39.81	41.31	42.40	44.45
	DAY LEQ	50.29		EVENING LEQ	48.18		NIGHT LEQ	47.69	

CNEL	54.77	Day hour	92.00
DAY LEQ	50.29	Absorptive?	no
		Use hour?	no
		GRADE dB	3.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Plus Project Traffic Noise

4	:Id	Vehicle Distribution (Light Truck Mix)				ADT	1390
Abbey Lane	:Road	Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow	Speed	25
West of Stoddard Wells Road	:Segment	Automobiles	75.56	13.96	10.49	97.40	Distance	30
		Medium Trucks	48.91	2.17	48.91	1.84	Left Angle	-90
		Heavy Trucks	47.30	5.41	47.30	0.74	Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	85.25	1.04	0.41	63.00	0.18	0.19	15.78	1.39	0.54
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
NOISE CALCULATIONS									
Reference levels	59.44	71.09	77.24	59.44	71.09	77.24	59.44	71.09	77.24
ADJUSTMENTS									
Flow	15.02	-4.10	-8.21	13.71	-11.61	-11.60	7.70	-2.86	-6.96
Distance	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	51.61	44.13	46.18	50.30	36.62	42.79	44.28	45.38	47.43
	DAY LEQ	53.27		EVENING LEQ	51.16		NIGHT LEQ	50.67	

CNEL	57.75	Day hour	92.00
DAY LEQ	53.27	Absorptive?	no
		Use hour?	no
		GRADE dB	3.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside light truck mix.

Existing Traffic Noise

5	:Id	
Stoddard Wells Road	:Road	
South of Abbey Lane	:Segment	

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	3000
Speed	45
Distance	64
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	173.74	3.60	6.00	128.98	0.60	1.00	31.99	5.00	8.33
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
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	15.56	-1.27	0.94	14.27	-9.06	-6.84	8.21	0.15	2.37
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	58.76	50.21	56.94	57.47	42.42	49.16	51.41	51.63	58.37
	DAY LEQ	61.31		EVENING LEQ	58.18		NIGHT LEQ	59.87	

CNEL	66.61
DAY LEQ	61.31

Day hour	93.00
Absorptive?	no
Use hour?	no
GRADE dB	4.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

Existing Plus Project Traffic Noise

5	:Id
Stoddard Wells Road	:Road
South of Abbey Lane	:Segment

Vehicle Distribution (Heavy Truck Mix)				
Motor-Vehicle Type	Daytime % (7 AM - 7 PM)	Evening % (7 PM - 10 PM)	Night % (10 PM - 7 AM)	Total % of Traffic Flow
Automobiles	75.54	14.02	10.43	92.00
Medium Trucks	48.00	2.00	50.00	3.00
Heavy Trucks	48.00	2.00	50.00	5.00

ADT	3160
Speed	45
Distance	64
Left Angle	-90
Right Angle	90

	Daytime			Evening			Night		
Noise Parameters	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks	Autos	Medium Trucks	Heavy Trucks
INPUT PARAMETERS									
Vehicles per hour	183.01	3.79	6.32	135.86	0.63	1.05	33.69	5.27	8.78
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
NOISE CALCULATIONS									
Reference levels	69.34	77.62	82.14	69.34	77.62	82.14	69.34	77.62	82.14
ADJUSTMENTS									
Flow	15.79	-1.05	1.17	14.49	-8.83	-6.61	8.44	0.38	2.60
Distance	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14	-1.14
Finite Roadway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
Constant	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00	-25.00
LEQ	58.99	50.43	57.17	57.70	42.65	49.39	51.64	51.86	58.60
	DAY LEQ	61.53		EVENING LEQ	58.41		NIGHT LEQ	60.10	

CNEL	66.83
DAY LEQ	61.53

Day hour	93.00
Absorptive?	no
Use hour?	no
GRADE dB	4.00

Notes:

(1) FHWA Traffic Noise Prediction Model FHWA-RD-77-108

(2) Vehicle percentages based on County of Riverside heavy truck mix.

APPENDIX G

VIBRATION WORKSHEETS

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19739 Burrtec C&D Processing Facility		Date: 2/28/25
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Residential to Southeast (Zoned M-1, Light Industrial)		
Address:	16992 Abbey Lane, Victorville		
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 =	58.00	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 =	0.059	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19739 Burrtec C&D Processing Facility	Date:	2/28/25
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Residential to Southeast (Zoned M-1, Light Industrial)		
Address:	16992 Abbey Lane, Victorville		

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 =	58.00	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 =	0.025	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19739 Burrtec C&D Processing Facility		Date: 2/28/25
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Industrial to East		
Address:	AVCO/Victorville/Burrtec Industries, 17080 Stoddard Wells Road, Victorville		
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 =	337.00	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 =	0.004	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19739 Burrtec C&D Processing Facility	Date:	2/28/25
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Industrial to East		
Address:	AVCO/Victorville/Burrtec Industries, 17080 Stoddard Wells Road, Victorville		

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 =	337.00	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 =	0.002	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19739 Burrtec C&D Processing Facility	Date:	2/28/25
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Park to East		
Address:	Grady Trammel Park, 17184 Stoddard Wells Road, Victorville		

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 =	325.00	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 =	0.004	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19739 Burrtec C&D Processing Facility	Date:	2/28/25
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Park to East		
Address:	Grady Trammel Park, 17184 Stoddard Wells Road, Victorville		

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 =	325.00	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 =	0.002	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19739 Burrtec C&D Processing Facility	Date:	2/28/25
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Church to North		
Address:	Emmanuel Temple CME, 17288 Stoddard Wells Road, Victorville		

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 =	367.00	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 =	0.004	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19739 Burrtec C&D Processing Facility	Date:	2/28/25
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Church to North		
Address:	Emmanuel Temple CME, 17288 Stoddard Wells Road, Victorville		

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 =	367.00	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 =	0.002	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19739 Burrtec C&D Processing Facility	Date:	2/28/25
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Industrial to West		
Address:	Burrtec Waste, 17000 Abbey Lane, Victorville		

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 =	110.00	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 =	0.023	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19739 Burrtec C&D Processing Facility	Date:	2/28/25
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Industrial to West		
Address:	Burrtec Waste, 17000 Abbey Lane, Victorville		

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 =	110.00	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 =	0.010	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19739 Burrtec C&D Processing Facility		Date: 2/28/25
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Industrial to Southwest		
Address:	16993 Abbey Lane, Victorville		
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 =	444.00	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 =	0.003	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS

Project:	19739 Burrtec C&D Processing Facility	Date:	2/28/25
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Industrial to Southwest		
Address:	16993 Abbey Lane, Victorville		

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 =	444.00	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 =	0.001	IN/SEC	OUTPUT IN BLUE



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