# 2.5 Noise

This section of the Environmental Impact Report (EIR) discusses and evaluates potential noise and vibration impacts resulting from the implementation of the project. The analysis is based on the review of existing resources, technical data, and applicable laws, regulations, and guidelines, as well as the following technical study prepared for the project in accordance with the *County Guidelines for Determining Significance – Noise* (County of San Diego 2009a) and *County of San Diego Report Format and Content Requirements – Noise* (County of San Diego 2009b):

- *Noise Analysis Report, Starlight Solar Project* (dBF Associates 2024) (Appendix J.1 of this EIR)
- *Construction Traffic Noise Memorandum, Starlight Solar Project* (dBF Associates 2025) (Appendix J.2 of this EIR)

Comments received in response to the Notice of Preparation (NOP) include concerns regarding the impacts of noise during construction and operation to nearby residents and wildlife. These concerns are addressed in this section of the EIR where applicable and within the noise analysis report (see Appendix J.1). Copies of the NOP and comment letters received in response to the NOP are included in Appendix A, NOP, Initial Study, and Public Comments, of this EIR.

## 2.5.1 Existing Conditions

### *2.5.1.1 Environmental Noise Background*

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity and that interferes with or disrupts normal activities. The human environment is characterized by a certain consistent noise level which varies by location and is termed ambient noise. Although exposure to high noise levels has been demonstrated to cause hearing loss, the principal human response to environmental noise is annoyance. The response of individuals to similar noise events is diverse and influenced by the type of noise, perceived importance of the noise and its appropriateness in the setting, time of day and type of activity during which the noise occurs, and sensitivity of the individual.

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air, and are sensed by the human ear. Sound is generally characterized by several variables, including frequency and intensity. Frequency describes the sound's pitch and is measured in cycles per second, or hertz (Hz), whereas intensity describes the sound's loudness and is measured in decibels (dB), which are measured using a logarithmic scale. A sound level of 0 dB is approximately the threshold of human hearing. Normal speech has a sound level of approximately 60 dB. Sound levels above about 120 dB begin to be felt inside the human ear as discomfort and eventually as pain at still higher levels. The minimum change in the sound level of individual events that an average human ear can detect is about 3 dB. The average person perceives a change in sound level of about 10 dB as a doubling (or halving) of the sound's loudness; this relation holds true for sounds of any loudness. Sound levels of typical noise sources and environments are provided in Table 2.5-1.

Because of the logarithmic nature of the dB unit, sound levels cannot be added or subtracted directly and are somewhat cumbersome to handle mathematically. A simple rule is useful, however, in dealing with sound levels. If a sound source generating a sound level is added to another sound source generating the same sound level, the resultant sound level increases by 3 dB, regardless of the initial sound level. Thus, for example, 60 dB + 60 dB = 63 dB, and 80 dB + 80 dB = 83 dB.

The normal human ear can detect sounds that range in frequency from about 20 Hz to 20,000 Hz. However, all sounds in this wide range of frequencies are not heard equally well by the human ear, which is most

sensitive to frequencies in the range of 1,000 Hz to 4,000 Hz. This frequency dependence can be taken into account by applying a correction to each frequency range to approximate the human ear's sensitivity within each range. This is called A-weighting and is commonly used in measurements of community environmental noise. The A-weighted sound pressure level (abbreviated as dBA) is the sound level with the "A-weighting" frequency correction. In practice, the level of a noise source is conveniently measured using a sound level meter that includes a filter corresponding to the dBA curve.

**Table 2.5-1. Sound Levels of Typical Noise Sources and Noise Environments**

| Noise Source (at Given Distance) | Noise Environment | A-Weighted Sound Level (dBA) | Human Judgment of Noise Loudness (Relative to Reference Loudness of 70 dB) |
|---|---|---|---|
| Military jet take-off with afterburner (50 feet) | Carrier flight deck | 140 | 128 times as loud |
| Civil defense siren (100 feet) | | 130 | 64 times as loud |
| Commercial jet take-off (200 feet) | | 120 | 32 times as loud<br>**Threshold of Pain** |
| Pile driver (50 feet) | Rock music concert inside subway station (New York) | 110 | 16 times as loud |
| Ambulance siren (100 feet)<br>Newspaper press (5 feet)<br>Gas lawn mower (3 feet) | | 100 | 8 times as loud<br>**Very Loud** |
| Food blender (3 feet)<br>Propeller plane flyover (1,000 feet)<br>Diesel truck (150 feet) | Boiler room<br>Printing press plant | 90 | 4 times as loud |
| Garbage disposal (3 feet) | Noisy urban daytime | 80 | 2 times as loud |
| Passenger car, 65 miles per hour (25 feet)<br>Living room stereo (15 feet)<br>Vacuum cleaner (10 feet) | Commercial areas | 70 | **Reference Loudness**<br>**Moderately Loud** |
| Normal speech (5 feet)<br>Air-conditioning unit (100 feet) | Data processing center<br>Department store | 60 | 1/2 as loud |
| Light traffic (100 feet) | Large business office<br>Quiet urban daytime | 50 | 1/4 as loud |
| Bird calls (distant) | Quiet urban nighttime | 40 | 1/8 as loud<br>**Quiet** |
| Soft whisper (5 feet) | Library and bedroom at night<br>Quiet rural nighttime | 30 | 1/16 as loud |
| | Broadcast and recording studio | 20 | 1/32 as loud<br>**Just Audible** |
| | | 0 | 1/64 as loud<br>**Threshold of Hearing** |

Source: dBF Associates (2024) (see Appendix J.1)

Because community noise fluctuates over time, a single measure called the equivalent sound level (Leq) is often used to describe the time-varying character of community noise. The Leq is the energy-averaged A-weighted sound level (dBA) during a measured time interval. It is equal to the level of continuous steady sound containing the same total acoustical energy over the averaging time period as the actual time-varying sound. Additionally, it is often desirable to know the acoustic range of the noise source being measured. This is accomplished through the maximum sound level (Lmax) and minimum sound level (Lmin) indicators, which represent the root-mean-square (RMS) maximum and minimum noise levels obtained

during the measurement interval. The Lmin value obtained for a particular monitoring location is often called the "acoustic floor" for that location.

The Community Noise Equivalent Level (CNEL) is a descriptor representing a 24-hour, time-weighted, annual average noise level based on the dBA. In the calculation process, noise occurring in the evening time period (7:00 p.m. to 10:00 p.m.) is penalized by adding 5 dB, while noise occurring in the nighttime period (10 p.m. to 7 a.m.) is penalized by adding 10 dB. These time periods and dB increases are intended to reflect a typical person's increased sensitivity to noise during late night and early morning hours. This descriptor is used by the State of California and the County of San Diego (County) to evaluate land-use compatibility with regard to noise (County of San Diego 2009a).

### *2.5.1.2 Environmental Vibration Background*

Structures, both above and below ground are susceptible to vibration impacts. Vibrations may be caused by the movement of heavy equipment, or from explosive energy such as blasting. Energy escapes blasting to generate air blast vibrations as well as ground vibrations through the soil and rock. Both air and ground vibrations create waves which move and disturb the medium through which they travel. When these waves encounter a structure, they may cause it to shake. Ground vibrations enter a building through its basement or foundation. Air blast enters through walls and roof. Since air blast waves travel faster than ground vibrations, occupants in structures far from a blast site may experience shaking from vibration and air blast as two separate events.

Ground-borne vibration is defined as any oscillatory motion induced in a structure or mechanical device as a direct result of some type of input excitation. Vibration consists of waves transmitted through solid material. There are several types of wave motion in solids, unlike in air, including compressional, shear, torsional, and bending. The solid medium can be excited by forces, moments, or pressure fields.

Ground-borne vibration propagates from the source through the ground to adjacent buildings by surface waves. Vibration may consist of a single pulse, a series of pulses, or a continuous oscillatory motion. The frequency of a vibrating object describes how rapidly it is oscillating, measured in Hz. Most environmental vibrations consist of a composite, or "spectrum" of many frequencies, and are generally classified as broadband or random vibrations. The normal frequency range of most ground-borne vibration that can be felt generally starts from a low frequency of less than 1 Hz to a high of about 200 Hz.

Ground-borne vibrations are expressed in terms of the peak particle velocity (PPV) in inches per second (in/sec). The particle velocity is the velocity of the soil particles resulting from a disturbance. Agencies such as the federal Office of Surface Mining (OSM) use the PPV descriptor because it has been shown to correlate with both structural damage thresholds and human perception of vibration, which often leads to complaints. PPV has a close to linear relationship with the stresses that buildings are subjected to when exposed to vibration (see Appendix J.1).

Noise and airborne vibration energy that escapes during blasting is called an air blast. An air blast is a pressure disturbance that travels through the air like any other sound, and it is quantified in the same manner as any noise event. Because of the impulsive nature of the blast, it is commonly referred to as an "over-pressure" (a temporary increase in air pressure over the standard atmospheric pressure). Generally, air blasts are of short duration, usually 2 to 10 seconds. Because the air blast contains mostly low frequencies (typically less than 250 Hz), it is often felt rather than heard. The over-pressure (and resultant noise) is a function of the source strength (charge weight), weather conditions, and distance to the receiver. The peak sound level (Lpeak) is the maximum instantaneous sound level during a stated time and is often used for measurement of blast noise (see Appendix J.1).

### 2.5.1.3 Environmental Setting and Location

The 588-acre project site is located south of Old Highway 80, between Jewel Valley Road and Tule Jim Lane, in the Boulevard Subregional Planning Area of unincorporated San Diego County. Surrounding land uses consist of single-family residences and vacant land. The *San Diego County General Plan: A Plan for Growth, Conservation, and Sustainability* (General Plan) (County of San Diego 2011a) designates the project site as Rural Lands 80 (RL-80) and Semi-Rural Residential (SR-10), and the County's Zoning Ordinance identifies the site as General Rural (S92).

### 2.5.1.4 Existing Noise Conditions

Some land uses are considered sensitive to noise. Noise-sensitive receptors are land uses associated with indoor and/or outdoor activities that may be subject to stress and/or significant interference from noise. They often include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, educational facilities, and libraries. Industrial, commercial, agricultural, and urban reserve land uses are generally not considered sensitive to ambient noise.

Noise-sensitive land uses (NSLUs) near the site include the single-family residences to the north, east, and west; and Clover Flat Elementary School approximately 0.78 mile to the northwest. The nearest sensitive receptors to the project include residences approximately 150 feet west, in the vicinity of sound Measurement Location (ML) 2 in Figure 2.5-1. The primary noise source in the project vicinity is distant vehicular traffic on Interstate 8 (I-8) and vehicular traffic on Old Highway 80. There are no additional NSLUs that are reasonably foreseeable in the project area.

### 2.5.1.5 Noise Measurement Survey

A noise measurement survey of the existing ambient noise environment consisting of a series of sound level measurements was conducted at nine locations (ML1 through ML9) in the project area on Wednesday, June 8, 2022. The measurement results are shown in Table 2.5-2 below and correspond to the locations depicted on Figure 2.5-1. The measured sound levels in the project area ranged from approximately 30 dBA Leq to 43 dBA Leq.

#### Methodology

A RION Model NL-31 American National Standards Institute (ANSI) Type 2 Integrating Sound Level Meter was used as the data-collection device. The meter was mounted to a tripod and placed roughly 5 feet above local ground to simulate the average height of the human ear. The sound level meter was calibrated before and after the measurement periods.

Weather conditions during the measurements were 80 to 95 degrees Fahrenheit (°F), 50% to 60% relative humidity, clear skies, and 1 to 4 miles per hour (mph) wind from the west. The measured sound levels in the project area ranged from approximately 30 to 43 dBA Leq.

~~The Cadna/A Noise Prediction Model was used to estimate project-generated hourly noise levels. Cadna/A is a Windows-based software program that predicts and assesses noise levels near noise sources. The model uses industry-accepted propagation algorithms and accepts sound power levels (in dB with reference level of 1 picoWatt) based on International Organization for Standardization (ISO) standard 9613-2 (ISO 1996). ISO 9613-2 is an internationally recognized standard that establishes a method for calculating the attenuation of sound during propagation outdoors, in order to predict the levels of environmental noise at a distance from a variety of sources. The method predicts the equivalent continuous dBA.~~

~~The project site configuration, including ground elevations and equipment heights, was imported into Cadna/A from the project CAD files. Because of the uncertainty associated with any computer model, the site operating parameters were designed to evaluate a worst-case condition. Model receptors were placed at project property lines closest to the given activities, 5 feet above ground level.~~

**Table 2.5-2. Ambient Sound Levels and Noise Sources in the Project Area**

| Measurement Location | | Time | Leq | Lmin | Lmax | L10 | L50 | L90 | Noise Sources |
|---|---|---|---|---|---|---|---|---|---|
| ML1 | 32.6465548°N, 116.2886682°W 1758 Jewel Valley Road | 11:00–11:15 | 43.0 | 30.9 | 55.4 | 46.4 | 40.1 | 34.2 | Wind in trees, birds, light vehicle, two high overhead jets |
| ML2 | 32.6555851°N, 116.2865613°W | 11:30–11:45 | 35.3 | 28.3 | 49.9 | 38.2 | 33.3 | 30.9 | Distant I-8, insects, two high overhead jets |
| ML3 | 32.6599830°N, 116.2730700°W Tule Jim Lane | 12:10–12:25 | 33.7 | 25.2 | 47.3 | 36.2 | 32.2 | 28.9 | Distant I-8, wind in trees |
| ML4 | 32.6509663°N, 116.2728720°W Tule Jim Lane | 14:15–14:30 | 37.7 | 25.6 | 52.3 | 38.0 | 32.5 | 27.2 | Distant I-8, wind in bushes, distant overhead jet |
| ML5 | 32.6464989°N, 116.2720713°W 1635 Tule Jim Lane | 14:35–14:50 | 42.1 | 25.2 | 56.3 | 40.7 | 30.9 | 26.6 | Insects, wind, distant roadway traffic |
| ML6 | 32.6443169°N, 116.2727774°W 1631 Tule Jim Lane | 14:55–15:10 | 37.0 | 22.9 | 50.4 | 40.7 | 32.0 | 26.0 | Birds, distant roadway traffic, distant overhead jet |
| ML7 | 32.6415691°N, 116.2784664°W | 15:10–15:25 | 32.8 | 24.6 | 55.4 | 35.8 | 30.2 | 26.5 | Insects, vehicle on Jewel Valley Road, distant overhead jet |
| ML8 | 32.6331360°N, 116.2797773°W Hidden Jewel horse ranch | 15:30–15:45 | 29.8 | 20.7 | 51.4 | 29.3 | 24.3 | 22.3 | Horses, insects, wind |
| ML9 | 32.6585602°N, 116.2865962°W | 16:10–16:25 | 37.6 | 29.1 | 55.1 | 40.4 | 35.0 | 31.4 | Distant I-8 traffic, wind, birds |

Note: All sound levels given in dBA.
L10 = sound level that is exceeded for 10% of the measurement time.
L50 = sound level that is exceeded for 50% of the measurement time.
L90 = sound level that is exceeded for 90% of the measurement time.

## 2.5.2 Regulatory Setting

### *2.5.2.1 Federal Regulations*

#### Federal Office of Surface Mining

The OSM, formerly known as U.S. Bureau of Mines, recommends a PPV safety level of 2.0 in/sec for residential structures. As stated in 30 Code of Federal Regulations (CFR) 816.67(b)(1)(i), which contains the limits included in U.S. Bureau of Mines publication RI8485, "airblast shall not exceed the maximum sound limits listed below at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area," as shown in Table 2.5-3 (see Appendix J.1).

**Table 2.5-3. Federal Maximum Allowable Sound Levels for Airblasts**

| Lower Frequency Limit of Measuring System, in Hz (±3 dB) | Maximum Level (dB) |
|---|---|
| 0.1 Hz or lower—flat response[1] | 134 peak |
| 2 Hz or lower—flat response | 133 peak |
| 6 Hz or lower—flat response | 129 peak |
| C-weighted—slow response[1] | 105 peak dBC |

[1]Only when approved by the regulatory authority.

Source: 30 CFR 816.67(b)(1)(i)

As stated in 30 CFR 816.67(d)(2)(i), which contains the limits included in U.S. Bureau of Mines publication RI8508, the "maximum ground vibration shall not exceed the following limits at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area," as shown in Table 2.5-4.

**Table 2.5-4. Federal Maximum Allowable Ground Vibrations**

| Distance (*D*) from the Blasting Site (feet) | Maximum Allowable Peak Particle Velocity (*V*max) for Ground Vibration (in/sec)[1] | Scaled Distance Factor to Be Applied without Seismic Monitoring (*Ds*) |
|---|---|---|
| 0 to 300 | 1.25 | 50 |
| 301 to 5,000 | 1.00 | 55 |
| 5,001 and beyond | 0.75 | 65 |

[1]Ground vibration shall be measured as the particle velocity. Particle velocity shall be recorded in three mutually perpendicular directions. The maximum allowable peak particle velocity shall apply to each of the three measurements.

Source: 30 CFR 816.67(d)(2)(i)

## *2.5.2.2 State Regulations*

### California Noise Control Act

Section 46000 of the California Health and Safety Code finds that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

## *2.5.2.3 Local Regulations*

### County of San Diego General Plan

The County establishes noise compatibility guidelines in the Noise Element of its General Plan (County of San Diego 2011b). The Noise Element characterizes the noise environment in San Diego County, establishes noise and land use compatibility standards, sets limitations on sound levels to be received by NSLUs, and outlines goals and policies to achieve these standards. The Noise Element also describes the County's goals for achieving the standards and introduces policies designed to implement the goals. Under implementation of the General Plan update, the County would use the noise compatibility guidelines to determine the compatibility of land uses when evaluating proposed development projects. The noise

compatibility guidelines indicate ranges of compatibility and are intended to be flexible enough to apply to a range of projects and environments.

In the Single-Family Residential land use category, noise levels up to 60 dBA CNEL are considered Acceptable at outdoor use areas; noise levels up to 75 dBA CNEL are considered Conditionally Acceptable.

The following policies from the Noise Element are relevant to the project:

- **N-1.2 Noise Management Strategies.** Require the following strategies as higher priorities than construction of conventional noise barriers where noise abatement is necessary:
    - Avoid placement of noise sensitive uses within noisy areas
    - Increase setbacks between noise generators and noise sensitive uses
    - Orient buildings such that the noise sensitive portions of a project are shielded from noise sources
    - Use sound-attenuating architectural design and building features
    - Employ technologies when appropriate that reduce noise generation (i.e., alternative pavement materials on roadways).
- **N-2.1 Development Impacts to Noise Sensitive Land Uses.** Require an acoustical study to identify inappropriate noise level where development may directly result in any existing or future noise sensitive land uses being subject to noise levels equal to or greater than 60 CNEL and require mitigation for sensitive uses in compliance with the noise standards listed in Table N-2 of the County's General Plan Noise Element.
- **N-3.1 Groundborne Vibration**. Use the Federal Transit Administration and Federal Railroad Administration guidelines, where appropriate, to limit the extent of exposure that sensitive uses may have to ground-borne vibration from trains, construction equipment, and other sources.
- **N-6.2 Recurring Intermittent Noise**. Minimize impacts from noise in areas where recurring intermittent noise may not exceed the noise standards listed in Table N-2, but can have other adverse effects.
- **N-6.4 Hours of Construction.** Require development to limit the hours of operation as appropriate for non-emergency construction and maintenance, trash collection, and parking lot sweeper activity near noise sensitive land uses.

## County of San Diego Noise Ordinance

The San Diego County Code of Regulatory Ordinances (County Code) Sections 36.401–36.435 (County Noise Ordinance) establishes prohibitions for disturbing, excessive, or offensive noise as well as provisions such as sound level limits for the purpose of securing and promoting the public health, comfort, safety, peace, and quiet for its citizens. Planned compliance with sound level limits and other specific parts of the ordinance allows presumption that the noise is not disturbing, excessive, or offensive. Limits are specified depending on the zoning placed on a property (e.g., varying densities and intensities of residential, industrial, and commercial zones). Where two adjacent properties have different zones, the sound level limit at a location on a boundary between two properties is the arithmetic mean of the respective limits for the two zones, except for extractive industries. The 1-hour average sound level limit applicable to extractive industries, including but not limited to borrow pits and mines, shall be 75 dBA at the property line regardless of the zone in which the extractive industry is located. It is unlawful for any person to cause or allow the creation of any noise that exceeds the applicable limits of the County Noise Ordinance at any point on or beyond the boundaries of the property on which the sound is produced.

Section 36.404, General Sound Level Limits, of the County Noise Ordinance contains sound level limits specific to types of land uses. Sound level limits are in terms of a 1-hour average sound level. The allowable noise limits depend upon the County's zoning district and time of day. The proposed project and adjacent properties would be located in County Noise Ordinance Zone (1), as they are within areas zoned S92 (General Rural). Table 2.5-5 lists the sound level limits for each zone within San Diego County.

**Table 2.5-5. County of San Diego Noise Ordinance, Sound Level Limits in dBA**

| Zone | Time Period | 1-Hour Average Sound Level Limits (dBA) |
|---|---|---|
| R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-90, S-92 and R-V and R-U with a density of less than 11 dwelling units per acre | 7:00 a.m. to 10:00 p.m.<br>10:00 p.m. to 7:00 a.m. | 50<br>45 |
| R-RO, R-C, R-M, S-86, V-5 and R-V and R-U with a density of 11 or more dwelling units per acre | 7:00 a.m. to 10:00 p.m.<br>10:00 p.m. to 7:00 a.m. | 55<br>50 |
| S-94, V-4 and all other commercial zones | 7:00 a.m. to 10:00 p.m.<br>10:00 p.m. to 7:00 a.m. | 60<br>55 |
| V1, V2<br>V1, V2<br><br>V1<br>V2 | 7:00 a.m. to 7:00 p.m.<br>7:00 p.m. to 10:00 p.m.<br><br>10:00 p.m. to 7:00 a.m.<br>10:00 p.m. to 7:00 a.m. | 60<br>55<br><br>55<br>50 |
| V3 | 7:00 a.m. to 10:00 p.m.<br>10:00 p.m. to 7:00 a.m. | 70<br>65 |
| M-50, M-52 and M-54 | Any time | 70 |
| S-82, M-56 and M-58 | Any time | 75 |
| S-881 | – | – |

Source: County of San Diego Noise Ordinance Section 36.404: Table 36.404

[1] S-88 zones are Specific Planning Areas. The sound level limits that apply in an S-88 zone depend on the use of the property.

Section 36.404 of the County Noise Ordinance also includes the following regulations:

(b) Where a noise study has been conducted and the noise mitigation measures recommended by that study have been made conditions of approval of a Major Use Permit, which authorizes the noise generating use or activity and the decision making body approving the Major Use Permit determined that those noise mitigation measures reduce potential impacts to a level below significance, implementation and compliance with those noise mitigation measures shall constitute compliance [with the 1-hour average sound levels identified in Table 2.5-5].

(d) If the measured ambient noise level exceeds the applicable limit in Table 36.404 [Table 2.5-5], the allowable one-hour average sound level shall be the one-hour average ambient noise level, plus three decibels. The ambient noise level shall be measured when the alleged noise violation source is not operating.

(e) The sound level limit at a location on a boundary between two zones is the arithmetic mean of the respective limits for the two zones. The one-hour average sound level limit applicable to extractive industries, however, including but not limited to borrow pits and mines, shall be 75 decibels at the property line regardless of the zone in which the extractive industry is located.

(f) A fixed-location public utility distribution or transmission facility located on or adjacent to a property line shall be subject to the sound level limits of this section, measured at or beyond six feet from the boundary of the easement upon which the facility is located.

**Section 36.408. Hours of Operation of Construction Equipment.** This section sets limits on the time of day and days of the week that construction can occur, as well as setting noise limits for construction activities. In summary, the allowable hours for the operation of construction equipment are 7:00 a.m. to 7:00 p.m. Monday through Saturday. No construction is allowed on Sundays and holidays except at private residences.

**Section 36.409 Sound Level Limitations on Construction Equipment.** This section requires that except for emergency work, between the hours of 7:00 a.m. and 7:00 p.m., no equipment shall be operated so as to cause an 8-hour average construction noise level in excess of 75 dBA when measured at the boundary line of the property where the noise source is located, or on any occupied property where the noise is being received.

**Section 36.410. Sound Level Limitations on Impulsive Noise.** In addition to the noise regulations under Section 36.404 and the limitations on construction equipment in Sections 36.408 and 36.409, the County Noise Ordinance includes the following sound limitations for blasting and other activities that generate impulsive noise. Under this section, except for emergency work or work on a public road project, no person shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level shown in Table 2.5-6, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25% of the minutes in any 1-hour measurement period. The maximum sound level depends on the use being made of the occupied property as shown in Table 2.5-6.

**Table 2.5-6. County of San Diego Maximum Allowable Sound Levels (Impulsive) Measured at Occupied Property in dBA**

| Occupied Property Use | Maximum Level (dBA) |
|---|---|
| Residential, village zoning or civic use | 82 |
| Agricultural, commercial or industrial | 85 |

Source: County of San Diego Noise Ordinance Section 36.410: Table 36.410A

## County of San Diego Consolidated Fire Code – Blasting Regulations

Blasting activity must conform to the guidelines specified in the County Consolidated Fire Code, Section 96.1.5607.16 (County of San Diego 2023). Blasting must be conducted by a blaster who has been approved by the Sheriff to conduct blasting operations and who has been placed on the list of approved blasters. Residents within 600 feet of blasting must be notified at least 24 hours prior to the blast. Blasting shall only be allowed Monday through Saturday, between the hours of 7:00 a.m. and 6:00 p.m. or half an hour before sunset, whichever occurs first, unless special circumstances warrant another time or day and the Issuing Officer grants approval of the change in time or day.

The owner of any property in an unincorporated area of San Diego County on which any blasting is intended to occur, shall give, or cause to be given, a one-time notice in writing, for any proposed blasting to the local fire agency and dispatch center and to all residences, including mobile homes, and businesses within 600 feet of any potential major blast location or 300 feet from any potential minor blast location. The notice shall be given not less than 24 hours, but not more than 1 week, before a blasting operation and shall be in a form approved by the Issuing Officer. The minimum 24-hour notice requirement may be reduced to a lesser period but not less than 1 hour if the Issuing Officer determines that special circumstances warrant

the reduction in time. Adequate precautions shall be taken to reasonably safeguard persons and property before, during and after blasting operations. These precautions shall include the following:

1. The blaster shall retain an inspector to inspect all buildings and structures, including mobile homes, within 300 feet of the blast site before blasting operations, unless inspection is waived by the owner and/or occupant.
2. An inspector shall complete and sign pre-blast inspection reports identifying all findings and inspection waivers.
3. The blaster shall retain an inspector to conduct a post-blast-inspection of any building and structure for which a written complaint alleging blast damage has been received. A written report of the inspection shall be immediately filed with the Issuing Officer and provided to any person who made a complaint for damages.
4. All major blasting operations shall be monitored by an approved seismograph located at the nearest structure within 600 feet of the blasting operation. All daily seismograph reports shall be maintained by the blaster for 3 years from the blasting.

### County Guidelines for Determining Significance: Noise

The County of San Diego published guidelines for determining the significance of noise-sensitive uses affected by airborne noise (County of San Diego 2009a). The guidelines consider a significant impact to occur if a project were to cause the exterior noise to exceed 60 dB (CNEL) or cause an increase of 10 dB (CNEL) over preexisting noise levels at outdoor living areas or private usable open space.

This document also provides guidelines for determining the significance of ground-borne vibration and noise impacts for use during the preparation of California Environmental Quality Act (CEQA) documents. Vibration is considered significant if project implementation would expose specific uses (organized into three categories) to ground-borne vibration or noise equal to or in excess of levels determined by the Federal Transit Administration's *Transit Noise and Vibration Impact Assessment* (Federal Transit Administration 2006).

## 2.5.3 Analysis of Project Effects and Determination as to Significance

### *2.5.3.1 Methodology*

#### Guidelines For Determination of Significance

The following thresholds are summarized from the County Noise Ordinance and the *County of San Diego, Guidelines for Determining Significance – Noise* (County of San Diego 2009a). A significant impact would result if the project would result in any of the following:

- **Construction Noise:** Per the County Noise Ordinance Section 36.409, construction noise would be significant if it exceeded an average sound level of 75 dB for an 8-hour period, between 7:00 a.m. and 7:00 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.
- **Impulse Noise:** Per the County Noise Ordinance Section 36.410, impulse noise or air blast would be significant if it exceeded 82 dBA for 25% of a 1-hour measurement (L25) at the boundary of the residential, village zoning or civic use from which the sound emanates; or 85 dBA L25 if measured

during an hour at the boundary of the commercial, agricultural, or industrial use from which the sound emanates.

- **Exterior Locations:** Per the Noise Element of the County General Plan, operational noise levels would be significant if they exceed 60 dB (CNEL) or create an increase of more than 10 dB (CNEL) over preexisting noise. In the case of single-family residential detached NSLUs, exterior noise shall be measured at an outdoor living area which adjoins and is on the same lot as the dwelling, and which contains at least the following minimum area:
    - Net lot area up to 4,000 square feet: 400 square feet
    - Net lot area 4,000 square feet to 10 acres: 10% of net lot area
    - Net lot area over 10 acres: 1 acre
        - For all other projects, exterior noise shall be measured at all exterior areas provided for group or private usable open space.
- **Interior Locations:** Per the Noise Element of the County's General Plan, operational noise levels would be significant if they exceeded 45 dB (CNEL) in interior spaces, except for the following cases:
    - Rooms which are usually occupied only a part of the day (schools, libraries, or similar facilities); the interior 1-hour average sound level due to noise outside should not exceed 50 dB.
    - Corridors, hallways, stairwell, closets, bathrooms, or any room with a volume less than 490 cubic feet.
- **Exterior, hourly:** Per the County Noise Ordinance Section 36.404, operational noise would be significant if it exceeded 50 dBA hourly Leq during the day (7:00 a.m. to 10:00 p.m.) or 45 dBA hourly Leq at night (10:00 p.m. to 7:00 a.m.). If the outdoor ambient sound level (without project contribution) is already higher than these limits, up to a 3 dBA increase above preexisting outdoor ambient sound level is permissible.
- **Ground-borne Vibration:** The OSM recommends a PPV safety level of 2.0 in/sec for residential structures.
- **Ground-borne Vibration:** Per County guidelines for significance (County of San Diego 2009a), ground-borne vibration from isolated events such as blasting would be significant if it exceeds 1 in/sec PPV at occupied facilities, including residences and buildings where people normally sleep (hotels, hospitals, residences, and other sleeping facilities) or institutional land uses with primarily daytime use (schools, churches, libraries and other institutions, and quiet offices).
- **Cumulative:** Cumulative noise impacts would be significant if more than a 1.5 dBA difference occurs when the "cumulative + existing" sound level (i.e., measured outdoor ambient plus acoustical contribution from any past, present, or foreseeable future projects in the project vicinity) is contrasted with the "cumulative + existing + project" sound level. A cumulative impact would occur when the combined sound level exceeds 60 dBA CNEL.

## Noise Modeling

The Cadna/A Noise Prediction Model was used to estimate project-generated hourly noise levels. Cadna/A is a Windows-based software program that predicts and assesses noise levels near noise sources. The model uses industry-accepted propagation algorithms and accepts sound power levels (in dB with reference level of 1 picoWatt) based on International Organization for Standardization (ISO) standard 9613-2 (ISO 1996). ISO 9613-2 is an internationally recognized standard that establishes a method for calculating the

attenuation of sound during propagation outdoors, in order to predict the levels of environmental noise at a distance from a variety of sources. The method predicts the equivalent continuous dBA.

The project site configuration, including ground elevations and equipment heights, was imported into Cadna/A from the project CAD files. Because of the uncertainty associated with any computer model, the site operating parameters were designed to evaluate a worst-case condition. Model receptors were placed at project property lines closest to the given activities, 5 feet above ground level.

## Project Blasting Details

A licensed blasting contractor who has been approved by the Sheriff to conduct blasting operations and who has been placed on the list of approved blasters would be responsible for performing and supervising all blasting activities, including the following:

- Pre-blast notifications and warning signaling
- Pre-blast inspection
- Drill pattern design
- Loading of explosives
- Blasting safety procedures
- Blasting site security
- Post-blast inspections and re-entry procedures
- Blast log and history

As outlined in the County Consolidated Fire Code, Section 96.1.5607.16 and project design feature **PDF-N-1** (Section 2.5.6.2, Project Design Features), blasting would only be allowed Monday through Saturday, between the hours of 7:00 a.m. and 6:00 p.m. or half an hour before sunset, whichever occurs first. Blasting would occur at 2- to 3-day intervals, with no more than one blast per day. No explosives would be stored on-site.

The blasting contractor would inspect all drill holes and maintain a drill log. Each drill log would be reviewed prior to loading any explosive or detonation device into any hole. Explosives used for blasting usually consist of a primer, secondary explosive, and an initiator. The blasting contractor would use ammonium nitrate mixed with fuel oil (ANFO) as the primary blasting agent. Non-electric delay blasting caps would be used to initiate the blasting agent. Delays are used to allow sufficient rock movement to create a free face to which subsequent delays can move and still provide the interaction between periods to increase rock breakage from the collision of the moving rock.

Pattern blasting is a common technique used in production blasting. This method is used when rock materials occur over a wide area. As implied by the name, blasting holes are drilled to follow a pre-designed pattern. The depth and spacing of holes are controlled to provide the maximum fracture with the minimum amount of ground vibration. Blasting activities would typically involve drilling multiple 2-inch-diameter holes into a boulder or bedrock to a depth of approximately 40 inches. Charges, typically weighing between 2.5 and 5 pounds each, would then be inserted into each drilled hole and detonated sequentially. Depth of the drill holes in these patterns are specific to each application as determined by the blasting contractor.

~~Using California Department of Transportation guidance, blasting vibration would be less than 1 in/sec PPV at distances beyond 15 feet from a blast (see Appendix J.1). All residences and the school are over 15 feet from potential blasts; thus, all blasts would result in vibration levels less than 1 in/sec PPV.~~

~~Ground vibrations, noise level, and air over-pressure would be monitored during each blast for compliance with the limits outlined in 30 CFR 816.67(b)(1)(i) and 816.67(d)(2)(i). Following each blast, seismographs would be checked to ensure that the blasting has not exceeded applicable noise and vibration criteria at the residential structures within 600 feet of the blast activity. In compliance with 30 CFR 816.7 (d)(2)(ii), the blast log would include a seismographic record of each blast. If residents request, homes within 600 feet of the blasting operations will be inspected for damage.~~

~~Since all residences and the school are located more than 15 feet from potential blasts, and blasting would use charges up to 5 pounds in weight, the resulting vibration levels would be less than 1 in/sec PPV at these distances. Therefore, vibrations are not expected to exceed the thresholds.~~

### *2.5.3.2 Noise Sensitive Land Uses Affected by Airborne Noise*

#### Guidelines for the Determination of Significance

The project would have a significant noise impact if it would result in the exposure of any on- or off-site, existing or reasonably foreseeable future NSLUs to exterior or interior noise, in excess of the following (County of San Diego 2011b):

- **Exterior Locations:** 60 dB (CNEL) or an increase of 10 dB (CNEL) over preexisting noise. In the case of single-family residential detached NSLUs, exterior noise shall be measured at an outdoor living area which adjoins and is on the same lot as the dwelling, and which contains at least the following minimum area:
    - Net lot area up to 4,000 square feet: 400 square feet
    - Net lot area 4,000 square feet to 10 acres: 10% of net lot area
    - Net lot area over 10 acres: 1 acre
        - For all other projects, exterior noise shall be measured at all exterior areas provided for group or private usable open space.
- **Interior Locations:** 45 dB (CNEL) except for the following cases:
    - Rooms which are usually occupied only a part of the day (schools, libraries, or similar facilities); the interior 1-hour average sound level due to noise outside should not exceed 50 dB.
    - Corridors, hallways, stairwell, closets, bathrooms, or any room with a volume less than 490 cubic feet.

#### Analysis

The nearest NSLUs near the site include the single-family residences to the north, east, and west, and Clover Flat Elementary School approximately 0.78 mile to the north. As shown in Table 2.5-2, the measured sound levels in the project area during the noise measurement survey ranged from approximately 30 dBA Leq to 43 dBA Leq. The noise level at the property line for the nearest residential structure would be approximately 32 dBA Leq (see Appendix J.1). All other residences would have substantially lower noise exposure. Additionally, the project is not located in the vicinity of an active airstrip or one that may become active, or within an airport land use plan or within 2 miles of a public airport or public use airport. The project would increase the noise level at nearby NSLUs by up to 5 dBA CNEL, to a level below 60 dBA CNEL (see Appendix J.1). Therefore, the exterior and interior noise level due to operation of the project within these nearest NSLUs would be compliant with the threshold and impacts would be **less than significant**.

### 2.5.3.3 Project-Generated Airborne Noise, Construction, and Decommissioning

#### Guidelines for the Determination of Significance

A significant impact would occur if noise generated by construction activities related to the project will exceed the standards listed in the County Noise Ordinance Section 36.409, Sound Level Limitations on Construction Equipment, and Section 36.410, Sound Level Limitations on Impulsive Noise.

The County Noise Ordinance Section 36.409 states:

> Except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated, that exceeds an average sound level of 75 dB for an eight-hour period, between 7 a.m. and 7 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received.

The County Noise Ordinance Section 36.410 (a) states:

> Except for emergency work or work on a public road project, no person shall produce or cause to be produced an impulsive noise that exceeds the maximum sound level, when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is received, for 25% of the minutes in the measurement period. The maximum sound level depends on the use being made of the occupied property.

Section 36.410(a) also specifies the following maximum sound levels:

- Residential, village zoning, or civic use – 82 dBA
- Agricultural, commercial, or industrial use – 85 dBA

Section 36.410(c) states:

> The minimum measurement period for any measurements conducted for impulse noise determination shall be one hour. During the measurement period, a measurement shall be conducted every minute from a fixed location on an occupied property. The measurements shall measure the maximum sound level during each minute of the measurement period. If the sound level caused by construction equipment or the producer of the impulsive noise, exceeds the maximum sound level for any portion of any minute it will be deemed that the maximum sound level was exceeded during that minute.

#### Analysis

The construction (and decommissioning) of the project would consist of several phases, including site preparation, development of staging areas and site access driveways, solar array assembly and installation, and construction of electrical transmission facilities. The highest construction noise levels would be produced by construction traffic, foundation placement, grading, road construction, and blasting. Noise modeling and arithmetic calculations were used to calculate estimated noise levels from construction noise sources and construction traffic noise levels as well as estimated blasting noise levels (Tables 2.5-7 through 2.5-9).

Standard construction equipment would be used during construction, including earth-moving equipment (e.g., bulldozers, excavators, backhoes) and road-building equipment (e.g., compactors, scrapers, graders). Construction equipment would include air compressors, all-terrain passenger vehicles, backhoes, cranes, a drill rig, flatbed trucks, a front-end loader, pick-up trucks, a pile driver, a trencher, and water trucks (see Table 2.5-7). Construction activity and delivery of construction materials and equipment would be limited to the County's allowable hours of operation (Monday through Saturday from 7:00 a.m. to 7:00 p.m.).

**Table 2.5-7. Project Construction Equipment Noise Source Levels**

| Noise Source | Noise Level | Number Allowed |
|---|---|---|
| Bulldozer | 86 dBA at 10 meters | 2 |
| Excavator | 80 dBA at 10 meters | 2 |
| Backhoe | 69 dBA at 10 meters | 2 |
| Compactor | 80 dBA at 10 meters | 2 |
| Scraper | 82 dBA at 10 meters | 2 |
| Grader | 86 dBA Lmax at 10 meters | 2 |
| Air compressor | 75 dBA at 10 meters | 2 |
| Crane | 71 dBA at 10 meters | 2 |
| Drill rig | 82 dBA at 10 meters | 1 |
| Loader | 79 dBA at 10 meters | 1 |
| Pile driver | 75 dBA at 10 meters | 4 |
| Trencher | 78 dBA at 10 meters | 1 |
| Water truck | 81 dBA at 10 meters | 2 |

Source: Department for Environment, Food, and Rural Affairs (2005)

## Construction Traffic

The closest residences to the project construction vehicle route are along Jewel Valley Road, which has a grade of approximately 7% to the north:

- Approximately 2,000 feet south of Old Highway 80, roughly 90 feet east of the centerline
- Approximately 5,000 feet south of Old Highway 80, roughly 70 feet west of the centerline

During Phase I of construction, the project would generate 90 light-duty worker trucks, 164 heavy-duty material trucks, and four water trucks on Jewel Valley Road in each direction per day. During Phase II, the project would generate 225 worker trucks, 466 material trucks, and eight water trucks on Jewel Valley Road in each direction per day. Although truck trips would likely be dispersed through the day, for a conservative, worst-case noise scenario it was assumed that each truck would enter and exit the work area during the same 1-hour period, at a speed of 30 mph. The resulting noise levels at the nearest residences to the project construction vehicle route are detailed in Table 2.5-8.

**Table 2.5-8. Project Construction Traffic Noise Levels (dBA)**

| Phase | Receptor | Morning | | Afternoon | |
|---|---|---|---|---|---|
| | | 1-Hour Average | 8-Hour Average | 1-Hour Average | 8-Hour Average |
| Phase I | East residence | 63.9 | 55.9 | 69.6 | 59.6 |
| | West residence | 66.1 | 58.1 | 69.5 | 59.5 |
| Phase II | East residence | 68.4 | 60.4 | 74.1 | 66.1 |
| | West residence | 70.6 | 62.6 | 74.0 | 66.0 |

Source: dBF Associates (2025) (see Appendix J.2)

The project would result in construction traffic noise levels up to approximately 66 dBA Leq (8-hour average). Therefore, construction traffic noise would be below the allowable level of 75 dBA (8-hour average) at the boundary line of the nearest residences along Jewel Valley Road. Construction traffic would be limited to the hours between 7:00 a.m. and 6:00 p.m. Therefore, the project would comply with County Noise Ordinance Section 36.409, and impacts related to construction traffic noise would be **less than significant**.

## Grading

For sound calculations, it is assumed that grading within any given area would be accomplished with one bulldozer, one excavator, and one backhoe. It was assumed that the equipment would operate continuously within a rectangular 5-acre area. No correction was applied for downtime associated with equipment maintenance, worker breaks, or similar situations.

Grading of the project site would occur directly up to the property line. Over the course of a full day of construction in which the equipment continuously moves throughout the work area, the average property line noise level would be approximately 74 dBA Leq (8 hours). Therefore, as construction grading for the project would not exceed the 8-hour average sound level of 75 dBA at the boundary line of the property, noise impacts related to construction would be **less than significant**.

## Foundation Placement

The photovoltaic (PV) panels would be placed in rows and supported by driven pile foundations. Each typical 300-foot-long row would have 13 foundations. Rows would be placed at an 18.5-foot spacing. Therefore, there would be one foundation per approximately 427 square feet. As a large majority of the project site would have PV panels, the project would require approximately 59,678 foundations. Over a 12-month construction period with 25 workdays per month, each day approximately 199 foundations would be set within a roughly 1.95-acre area.

Each driven pile foundation would be set using a pile driver. It was assumed that there would be up to four pile drivers simultaneously operating, and each could drive five piles per hour. A mini-piling rig produces a sound level of 75 dBA at 10 meters (about 33 feet) (see Appendix J.1). No downtime for maintenance or breaks was considered in the calculations.

The closest foundations to a project property line would be set approximately 30 feet away. Over the course of a full day of construction in which 200 foundations are set, assuming a square work area, the furthest piles would be driven roughly 315 feet from the same property line; at that distance, the sound level would be approximately 55 dBA. At the closest property line to pile driving, considering the movement of equipment throughout the work area, the average property line noise level would be approximately 67 dBA

Leq (8 hours). Therefore, as foundation placement for the project would not exceed the 8-hour average sound level of 75 dBA at the boundary line of the property, noise impacts related to construction would be **less than significant**.

### Road Construction

For sound calculations, it is assumed that road construction within any given area would be accomplished with one compactor, one scraper, and one grader. It was assumed that the equipment would operate continuously within a linear 2-acre area. No correction was applied for downtime associated with equipment maintenance, worker breaks, or similar situations.

The closest road construction area to a project property line would occur adjacent to the property line. The property line noise level would be approximately 70 dBA Leq (8 hours; Table 2.5-9). Therefore, as road construction for the project would not exceed the 8-hour average sound level of 75 dBA at the boundary line of the property, noise impacts related to pile driving would be **less than significant**.

### Decommissioning Activities

Upon conclusion of the project's expected 35-year operational lifespan, the solar facility would be dismantled and its materials removed from the project site. For purposes of this noise assessment, sequential activities associated with the decommissioning activities would be considered similar to construction phases. Examples include the following activities:

- Removal of structures and components would involve equipment and activities akin to those that would install the PV system during construction.
- Upon removal and/or recycling of structures and components, restoring the site surface and hydroseeding would be comparable to the site preparation phase during construction.
- Subsurface post elements for the PV system support structure would likely be extracted or otherwise removed by vibratory equipment similar in characteristics and noise generation to the anticipated pile-driving–type post-installation methods and means.

In sum, there are no anticipated decommissioning activities that would be louder than their construction-related counterparts. Therefore, the analysis of construction noise and vibration can conservatively be used to assess noise and vibration from comparable decommissioning activities and equipment. Noise impacts from decommissioning activities would be **less than significant**.

### Blasting

Blasting activities may be required to facilitate the construction of solar array foundations and the gen-tie line. Removal of soil and overburden—loose, poorly consolidated materials such as soil, sand, and rock fragments—requires the use of tractors and excavators. Hard rock formations will require drilling and blasting to fracture and to loosen the rock. Blasting was assumed to generate a noise level of up to 94 dBA Lmax at 50 feet (see Appendix J.1). The closest property line is approximately 30 feet from a potential blast location. At this location, the blast noise level would be up to approximately 98 dBA Lmax (Table 2.5-9). Under County Noise Ordinance Section 36.410, impulsive noises may not exceed maximum sound levels (Table 2.5-5) for more than 25% of the minutes (15 minutes) in any 1-hour measurement period. The project would blast no more than once per day. As such, the project would not exceed 82 dBA Lmax for more than 25% of the time in any 1-hour period.

Blasting conducted during construction would be conducted per County Consolidated Fire Code Section 96.1.5607.16 and project design feature **PDF-N-1**, which describes the allowable hours of operation, requirements for public notification, and requirements for inspection and monitoring.

As previously discussed, the project would not generate either operational or construction noise in excess of the standards in County Noise Ordinance Sections 36.404, 36.408, and 36.409. ~~Therefore, impacts related to impulsive noise would be **less than significant**.~~ However, if the stationary equipment was to change and/or the layout is different from what was evaluated, operational noise levels have the potential to exceed the County's Noise Ordinance threshold and impacts may be **potentially significant (Impact N-1)**.

**Table 2.5-9. Project Noise Levels at Property Line Resulting from Project Construction**

| Construction Activity | Primary Noise Source | Noise Level | Threshold of Significance | Threshold Exceeded? |
|---|---|---|---|---|
| Foundation placement | Pile drivers | 67 dBA Leq (8 hours) | 75 dBA (8 hours) | No |
| Grading | Bulldozer, excavator, backhoe | 74 dBA Leq (8 hours) | 75 dBA (8 hours) | No |
| Road construction | Compactor, scraper, grader | 70 dBA Leq (8 hours) | 75 dBA (8 hours) | No |
| Blasting | Blasting using charges up to 5 pounds in weight | 98 dBA Lmax (once per day) | 82 dBA for more than 25% of 1-hour measurement | No |

### *2.5.3.4 Project-Generated Airborne Noise, Operation*

#### Guidelines for the Determination of Significance

Noise attributed to normal operation of the project would have a significant noise impact if it exceeded daytime (i.e., between 7:00 a.m. and 10:00 p.m.) and nighttime (i.e., between 10:00 p.m. and 7:00 a.m.) hourly Leq thresholds that depend on the zoning district of the receiving property line and/or the property producing the noise per County Noise Ordinance Section 36.404(a). As the project is located in an area zoned S92, the maximum allowable sound levels would be 50 dBA from 7:00 a.m. to 10 p.m. and 45 dBA from 10:00 p.m. to 7:00 a.m.

#### Analysis

Noise from operation of the proposed project would result primarily from stationary equipment, the transformers, and battery storage containers, including heating, ventilation, and air-conditioning (HVAC) units. There would be 33 inverter/transformer platforms spaced evenly throughout the PV array areas. The collector substation at the northeast corner of the PV module area would include five transformers. National Electrical Manufacturers Association publication ST 20-2014 (National Electrical Manufacturers Association 2014) governs maximum allowable noise levels from transformers; a transformer may not produce more than 67 dB at 1 foot.

There would be 378 battery storage containers in two areas near the northeast corner of the PV array area. It was assumed that each container would be fitted with one HVAC unit that produces a sound pressure level of 63 dBA or less at 5 feet. This assumption is based on previous experience with projects involving cooling for similar-sized electrical equipment boxes in similar environments. The noise source height is assumed to be approximately 3 feet above ground.

Based on the modeling results, noise levels at the project boundary would range up to 37 dBA Leq at the property line corner closest to the battery energy storage system (BESS) area (southwest corner of

Assessor's Parcel Number 612-090-570) (see Appendix J.1). Therefore, noise levels would not exceed 50 dBA from 7:00 a.m. to 10 p.m. and 45 dBA from 10:00 p.m. to 7:00 a.m., and the project would comply with County Noise Ordinance Section 36.404. ~~Therefore, the project would not generate noise in excess of levels specified by Section 36.404, and noise impacts from on-site operations would be **less than significant**.~~ However, should project construction phases or other activities overlap in schedule or otherwise occur concurrently, the project does have the potential to exceed these thresholds and impacts may be **potentially significant** (**Impact N-2**).

### *2.5.3.5 Ground-borne Vibration Impacts*

#### Guidelines for the Determination of Significance

The project would have a significant noise impact if it would expose NSLUs and other vibration-sensitive uses to existing and future ground-borne vibration, including vibration sources caused by new development impacting existing or foreseeable future NSLUs. The ground-borne vibration and noise standards in *County of San Diego, Guidelines for Determining Significance – Noise* (County of San Diego 2009a) identify the following three land use categories with increasing sensitivity to ground-borne vibration and noise impacts:

- Category 1: Buildings where low ambient vibration is essential for interior operations (research and manufacturing facilities with special vibration constraints)
- Category 2: Residences and buildings where people normally sleep (hotels, hospitals, residences, and other sleeping facilities)
- Category 3: Institutional land uses with primarily daytime use (schools, churches, libraries, other institutions, and quiet offices)

Therefore, the project would result in a significant impact if the PPV for frequent events (more than 70 vibration events per day) would exceed 0.0018 in/sec RMS for Category 1 land uses, 0.004 in/sec RMS for Category 2, and 0.0056 in/sec RMS for Category 3. Occasional or infrequent events (fewer than 70 vibration events per day) would be considered a significant impact if they would exceed 0.0018 in/sec RMS for Category 1 land uses, 0.010 in/sec RMS for Category 2, and 0.014 in/sec RMS for Category 3.

For Categories 2 and 3 with occupied facilities, isolated events such as blasting are significant when the PPV exceeds 1 in/sec. Non-transportation vibration sources such as impact pile drivers or hydraulic breakers are significant when their PPV exceeds 0.1 in/sec.

#### Analysis

##### Construction

Depending on the type and method of use of equipment, construction activity can result in varying degrees of ground vibration. Ground vibrations are caused by the operation of construction equipment and diminish in strength with distance from the vibration source. Buildings founded on the soil in the vicinity of the construction site can experience these vibrations in a manner ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels. Ground vibrations from construction activities do not often reach the levels that can damage structures, but they can achieve the sensible range in buildings very close to the site.

Typical vibration-inducing construction equipment used during construction of the project would likely include bulldozers, pile drivers, graders, and miscellaneous trucks. A typical vibratory pile driver produces 0.17 in/sec PPV at 25 feet (see Appendix J.1). Pile driving would occur as close as 175 feet from the closest residence (1909 Jewel Valley Road) and would generate vibration levels of 0.02 in/sec PPV or below at

both the closest residence and the school. The piece of construction equipment expected to generate the highest level of vibration is a large bulldozer, which produces a vibration level of 87 vibration decibels (VdB) (see Appendix J.1). The bulldozer could operate as close as 125 feet from the closest residence (1909 Jewel Valley Road) and approximately 4,450 feet from the school. At 125 feet, the vibration level would be approximately 66 VdB, which is equal to approximately 0.002 in/sec RMS. Since, the strength of earth-bound vibrations attenuate over distance, the level of vibration at 4,450 feet would be less than the level at 125 feet, which is 0.002 in/sec RMS. Therefore, vibration levels from construction equipment would not exceed 0.01 in/sec RMS at all residences or 0.014 in/sec RMS at the school.

The primary source of vibration from the project would be from blasting, which would be conducted in compliance with the 2023 County of San Diego Consolidated Fire Code and San Diego County Sheriff's Office regulations for licensed blasting contractors. Ground vibrations and airblast over-pressure are part of the output of the rock blasting operations. No two blasts on-site would be identical. Blast designs would be modified to reflect the unique conditions of each locality. Factors that affect noise and vibration transmission include explosive composition, charge weight and delays, distance, depth of burial of the charge, and geologic formations. Air over-pressure transmission is also affected by intensity, terrain features (trees, foliage, and other screening) orientation of the blast face, atmospheric conditions, temperature gradients, and wind direction and velocity.

Using California Department of Transportation guidance, blasting vibration would be less than 1 in/sec PPV at distances beyond 15 feet from a blast (see Appendix J.1). All residences and the school are over 15 feet from potential blasts; thus, all blasts would result in vibration levels less than 1 in/sec PPV. Ground vibrations, noise level, and air over-pressure would be monitored during each blast for compliance with the limits outlined in 30 CFR 816.67(b)(1)(i) and 816.67(d)(2)(i). Following each blast, seismographs would be checked to ensure that the blasting has not exceeded applicable noise and vibration criteria at the residential structures within 600 feet of the blast activity. In compliance with 30 CFR 816.7 (d)(2)(ii), the blast log would include a seismographic record of each blast. If residents request, homes within 600 feet of the blasting operations will be inspected for damage. Since all residences and the school are located more than 15 feet from potential blasts, and blasting would use charges up to 5 pounds in weight, the resulting vibration levels would be less than 1 in/sec PPV at these distances. Therefore, vibrations are not expected to exceed the thresholds.

The blasting contractor would ensure compliance with County Consolidated Fire Code Section 96.1.5607.16 and 30 CFR 816.67(b)(1)(i) and 816.67(d)(2)(i) which limit sound and ground vibrations at sensitive receptors outside the permit area (Table 2.5-3 and Table 2.5-4). Therefore, impacts related to construction ground-borne vibration and noise would be **less than significant**.

### Operational Activities

No operational components of the project include significant ground-borne noise or vibration sources, and no significant vibration sources currently exist, or are planned, in the project vicinity. Therefore, there would be **no impact** related to operational ground-borne vibration and noise.

## 2.5.4 Cumulative Impact Analysis

The cumulative impact analysis for noise was performed using the projects listed in Table 1-4 in Chapter 1.0, Project Description, Location, and Environmental Setting. Noise levels tend to diminish quickly with distance from a source; therefore, the geographic scope for the analysis of cumulative impacts related to noise would be limited to projects within approximately 0.25 mile of project components and access routes. This area is defined as the geographic extent of the cumulative impact area because noise impacts would generally be localized, mainly within approximately 500 feet from any noise source; however, it is possible

that noise from different sources within 0.25 mile of each other could combine to create a significant impact to receptors at any point between the projects.

### 2.5.4.1 Cumulative, Noise Sensitive Land Uses Affected by Airborne Noise

The nearest sensitive receptors to the project include residences approximately 150 feet west, in the vicinity of ML2 in Figure 2.5-1. The primary noise source in the project vicinity is distant vehicular traffic on I-8 and vehicular traffic on SR 94 (Old Highway 80). There are no additional NSLUs that are reasonably foreseeable in the project area. As previously discussed, the project would not individually increase the exterior and interior noise level at any NSLU by more than 10 dBA CNEL or exceed 45 dBA CNEL.

Multiple projects are proposed or operating in the project area that would affect NSLUs. However, any potential cumulative noise impacts would be reduced through compliance with local laws and regulations. Furthermore, cumulative renewable energy projects and other development that are subject to the environmental permitting process would have a detailed analysis of noise and land use conflicts as part of the project-level environmental review. The permitting process normally requires each project to comply with local standards and to avoid noise-related land use conflicts. This means that all projects, even if unrelated to the proposed project, would need to comply with local community noise standards, such as the County Noise Ordinance. Additional mitigation may be applied to the cumulative projects through environmental permitting by lead agencies. Therefore, the impacts of the project, in combination with other cumulative projects, **would not result in a cumulatively considerable impact** regarding adverse noise impacts to NSLUs.

### 2.5.4.2 Cumulative, Project-Generated Airborne Noise, Construction

The average hourly noise level for construction traffic would be approximately 70.6 dBA and 74.1 dBA at the closest residential property boundaries. Construction noise levels would not exceed the 8-hour average sound level of 75 dBA at the boundary line of the property. At distances greater than 0.25-mile, construction noise would be briefly audible and steady construction noise from the project would generally dissipate into quiet background noise levels. Accordingly, the impacts of the project, in combination with other cumulative projects, **would not be cumulatively considerable** with regard to construction noise.

### 2.5.4.3 Cumulative, Project-Generated Airborne Noise, Operation

Operational noise, primarily due to the transformers and battery storage containers, including HVAC units, would not exceed the County's Noise Ordinance standards at the project property lines. The only sources of noise associated with the project's operations that could combine with the cumulative projects to result in a potential cumulative impact near sensitive receptors would be employee vehicles accessing the sites. Given the limited number of employees during operations of the project and the nearby cumulative projects, the project **would not result in a cumulatively considerable impact** with regard to operational noise**.**

### 2.5.4.4 Cumulative, Ground-borne Vibration Impacts

The primary source of vibration from the project would be from blasting, which would be conducted in compliance with the 2023 County of San Diego Consolidated Fire Code and San Diego County Sheriff's Office regulations for licensed blasting contractors. Cumulative effects due to ground-borne vibration would occur only if there were sources of vibration within 200 feet of the boundaries between the project and cumulative project sites, which would also be required to comply with these regulations. As such, the

potential overlap of construction-related vibration from cumulative projects is unlikely to create a significant impact on residences near the proposed project. Therefore, the impacts of the project, in combination with other cumulative projects, **would not be cumulatively considerable** with regard to ground-borne vibration.

## 2.5.5 Significance of Impacts Prior to Mitigation

### *2.5.5.1 Noise-Sensitive Land Uses Affected by Airborne Noise*

As described in Section 2.5.3.1, the operational noise levels from the stationary equipment of the project would be compliant with County thresholds of exterior and interior noise levels at the nearest NSLUs. However, if the stationary equipment was to change and/or the layout is different from what was evaluated, operational noise levels have the potential to exceed the County's Noise Ordinance threshold and impacts may be **potentially significant (Impact N-1)**.

### *2.5.5.2 Project-Generated Airborne Noise, Construction and Decommissioning*

The phases of construction and decommissioning would comply with County Code Section 36.409 construction noise thresholds of 75 dB Leq for an 8-hour metric between 7:00 a.m. to 7:00 p.m., and the impulse noise limit of 82 dBA Lmax, pursuant to the County Noise Ordinance Sections 36.408 through 36.410. However, should project construction phases or other activities overlap in schedule or otherwise occur concurrently, the project does have the potential to exceed these thresholds and impacts may be **potentially significant** (**Impact N-2**).

### *2.5.5.3 Project-Generated Airborne Noise, Operation*

Operational noise not would exceed the County's Noise Ordinance standards at the project property lines; therefore, the project would result in a **less than significant** impact.

### *2.5.5.4 Ground-borne Vibration Impacts*

As described in Section 2.5.3.4, based on the anticipated construction equipment and distance from the equipment to the adjacent NSLUs, construction activities would result in vibration levels below County standards. Hence, County-compliant vibration levels from operation of the construction equipment would be a **less than significant** impact.

No operational components of the project include significant ground-borne noise or vibration sources, and no significant vibrations sources currently exist, or are planned, in the project vicinity. Thus, impacts of ground-borne noise or vibration attributed to the operation of the project would be **less than significant**.

## 2.5.6 Mitigation Measures and Project Design Features

### *2.5.6.1 Mitigation Measures*

Mitigation measures **M-N-1**, **M-N-2**, and **M-BI-10** would mitigate potential impacts under **Impacts N-1** and **N-2** as follows.

**M-N-1** **Stationary Equipment**. The project shall comply with the County of San Diego's Noise Ordinance Section 36.404 based upon the current proposed layout and the anticipated major noise-producing operating stationary equipment (equipment) deployed for the project. The equipment modeled in the noise analysis report prepared for the EIR (Appendix J.1 of the EIR) was selected as representative technology at the time the report was prepared. The Applicant may propose to use different equipment than what was used to perform the noise modeling in the noise analysis report or propose a change in the equipment layout. If different equipment is selected and/or the layout of equipment is changed subsequent to project approval, the Applicant will be required to submit a revised Noise Analysis, and a revised site plan if needed, as follows:

1. The Project Applicant shall retain a County-approved CEQA Noise Consultant to prepare a new predictive operations noise analysis in accordance with the *County of San Diego, Report Format and Content Requirements – Noise* (County of San Diego 2009b). Any alterations or modifications proposed and approved pursuant to this procedure shall be included in the proposed project design plans. Any proposed equipment selections, equipment duty cycles, project layout alterations, and/or the addition, modification, reduction of the preceding equipment noise limits and measures may be approved, if they are demonstrated to comply at the property line with applicable outdoor hourly Leq noise limits per Section 36.404(a) of the County Noise Ordinance.
2. The above-identified measures shall take place prior to approval of any building plans for the project. Any alterations or modifications proposed and approved pursuant to this procedure shall be included in the proposed project design plans.

**M-N-2** **Construction Noise Management Plan**. Prior to construction and decommissioning, the Applicant shall prepare a Construction Noise Management Plan (CNMP) which establishes construction activity restrictions in order to reliably achieve compliance with the County's 8-hour 75 dBA Leq standard at the project property lines adjoining existing occupied properties, defined by Section 36.402.(m) as "property on which there is a building for which a certificate of occupancy has been issued". The CNMP shall demonstrate compliance with the County Noise Ordinance for avoiding potential impacts caused by operating construction equipment and vehicle noise sufficiently proximate to these property lines of occupied properties. The CNMP shall be submitted to County Planning and Development Services 30 days prior to any land disturbance. Components of the CNMP shall include the following:

1. Affected property owners shall be notified in writing 2 weeks prior to construction activity within 500 feet of their property boundaries.
2. ~~In order to comply with the County Noise Ordinance (Section 36.409, Construction Equipment), the acoustical usage factors (AUF) of heavy construction equipment used on the project site shall be comparable to those listed in Table 1 of the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) User Guide (FHWA 2017). Lmax values at 50 feet shall be the lower of either the "Spec. 721.560" or "Actual Measured" values in Table 1 of the RCNM User Guide, and duration of heavy equipment operating for construction shall comply with the following limitations by activity, for the specified distance between the indicated heavy equipment operations and a position along the property line of an occupied parcel:~~
    a. ~~Perimeter fence installation – up to two flatbed trucks and a front-end loader:~~

i. Within 15 feet – not permitted
ii. 15 to 25 feet – no more than 20 minutes per 8-hour period
iii. 25 to 50 feet – no more than 1 hour per 8-hour period
iv. 50 to 75 feet – no more than 4 hours per 8-hour period
v. Beyond 75 feet – no restriction

b. Site preparation (clearing) – water truck and tractor (mowing attachment):
i. Within 20 feet – not permitted
ii. 20 to 25 feet – no more than 20 minutes per 8-hour period
iii. 25 to 50 feet – no more than 30 minutes per 8-hour period
iv. 50 to 75 feet – no more than 2 hours per 8-hour period
v. 75 to 100 feet – no more than 4 hours per 8-hour period
vi. Beyond 100 feet – no restriction

c. Site preparation (earth-moving) – bulldozer, water truck, and scraper:
i. Within 25 feet – not permitted
ii. 25 to 50 feet – no more than 20 minutes per 8-hour period
iii. 50 to 75 feet – no more than 1 hour per 8-hour period
iv. 75 to 100 feet – no more than 3 hours per 8-hour period
v. 100 to 125 feet – no more than 6 hours per 8-hour period
vi. Beyond 125 feet – no restriction

d. Site preparation (grading) – flatbed truck, grader, water truck, and sheepsfoot roller:
i. Within 25 feet – not permitted
ii. 25 to 50 feet – no more than 20 minutes per 8-hour period
iii. 50 to 75 feet – no more than 1 hour per 8-hour period
iv. 75 to 100 feet – no more than 3 hours per 8-hour period
v. 100 to 125 feet – no more than 6 hours per 8-hour period
vi. Beyond 125 feet – no restriction

e. Underground work (trenching) – excavator, sheepsfoot roller, water truck, 5-kilowatt (kW) generator, and Gradall (4 × 4 forklift):
i. Within 25 feet – not permitted
ii. 25 to 50 feet – no more than 20 minutes per 8-hour period
iii. 50 to 75 feet – no more than 1.5 hours per 8-hour period
iv. 75 to 100 feet – no more than 3 hours per 8-hour period
v. Beyond 100 feet – no restriction

f. Underground work (back-filling) – Aussie padder, sheepsfoot roller, water truck, 5kW generator, and Gradall (4 × 4 forklift):
i. Within 25 feet – not permitted
ii. 25 to 50 feet – no more than 20 minutes per 8-hour period
iii. 50 to 75 feet – no more than 1.5 hours per 8-hour period
iv. 75 to 100 feet – no more than 3 hours per 8-hour period
v. Beyond 100 feet – no restriction

~~g. System installation – Gradall (4 × 4 forklift), crane, all terrain vehicle, vibratory pile driver (RGT Model RG21T or comparable), pick-up truck, and 5-kW generator:~~

~~i. Within 25 feet – not permitted~~

~~ii. 25 to 50 feet – no more than 20 minutes per 8-hour period~~

~~iii. 50 to 75 feet – no more than 1.5 hours per 8-hour period~~

~~iv. 75 to 100 feet – no more than 4 hours per 8-hour period~~

~~v. Beyond 100 feet – no restriction~~

All construction equipment operations shall incorporate all recommended noise reducing measures such as, but not limited to, limiting construction equipment operations, installation of temporary noise barriers, and implementation of the recommendations within the CNMP to demonstrate compliance with the County Noise Ordinance, Sections 36.408 and 36.409.

Concurrent construction activities may occur so long as next closest construction activity to the same studied property line position is at least four times its "no restriction" distance away. By way of example, if earth moving was occurring near a fixed point on the potentially affected property line, the next closest set of earth-moving equipment performing like work, or perhaps an overlapping and comparable scheduled activity (e.g., grading), shall be permitted if no closer than 500 feet (equal to 4 × 125 feet) from the same receptor point.

3. If distance buffers or duration limits cannot be maintained, then the Applicant or its contractor will implement on-site temporary sound abatement measures, such as a field-erected noise barrier (e.g., sound blankets) of sufficient height and horizontal extent, or the placement of storage containers and other similarly solid sound-occluding structures, to ensure construction activity noise at the project property line complies with County standards.
4. The CNMP will also include direction for the Applicant or its contractor(s) to implement the following:
    a. Trucks and other engine-powered equipment shall be equipped with noise reduction features, such as mufflers and engine shrouds, which are no less effective than those originally installed by the manufacturer;
    b. Trucks and other engine-powered equipment shall be operated in accordance with posted speed limits and limited engine idling requirements;
    c. Usage of truck engine exhaust compression braking systems shall be limited to emergencies;
    d. Back-up beepers for all construction equipment and vehicles shall be adjusted to the lowest noise levels possible, provided that Occupational Safety and Health Administration (OSHA) and California OSHA's safety requirements are not violated;
    e. Vehicle horns shall be used only when necessary, as specified in the contractor's specifications; and
    f. Radios and other noise-generating "personal equipment" shall be prohibited.

**M-BI-10** **Noise Reduction.** Construction- and decommissioning-related activities that are excessively noisy (e.g., clearing, grading, grubbing, or blasting) adjacent to breeding/nesting areas shall incorporate noise-reduction measures (described below) or be curtailed during the breeding/nesting season of sensitive bird species.

1. Trucks and other engine-powered equipment shall be equipped with noise reduction features, such as mufflers and engine shrouds, which are no less effective than those originally installed by the manufacturer.
2. Trucks and other engine-powered equipment shall be operated in accordance with posted speed limits and limited engine idling requirements.
3. Usage of truck engine exhaust compression braking systems shall be limited to emergencies.
4. Back-up beepers for all construction equipment and vehicles shall be adjusted to the lowest noise levels possible, provided that Occupational Safety and Health Administration's (OSHA's) and the California Division of Occupational Safety and Health's safety requirements are not violated. These settings shall be retained for the duration of construction activities.
5. Vehicle horns shall be used only when absolutely necessary, as specified in the contractor's specifications.
6. Radios and other noise-generating "personal equipment" shall be prohibited.

If construction-related activities that are excessively noisy (e.g., clearing, grading, grubbing, or blasting) occur during the period of January 15 through August 31, a County-approved biologist shall conduct preconstruction surveys in suitable nesting habitat adjacent to the construction area to determine the location of any active nests in the area (see M-BI-5).

### *2.5.6.2 Project Design Features*

The Applicant has identified and committed to including the following project design features as part of the project to alleviate adverse noise effects, to the extent feasible.

**PDF-N-1** **Blasting Control Measures.** The blasting contractor will control blasting-induced vibration and noise per the requirements of County Consolidated Fire Code Section 96.1.5607.16. General control measures include the following:

1. Stemming will be of uniform size in order to ensure consistency between individual shots.
2. The weight of explosives used per delay will be determined by adherence to the Scaled Distance Equation.
3. Independent delays will be used for each blast hole to control vibration.
4. No blasting will take place when wind velocity equals or exceeds 15 miles per hour. A licensed blasting contractor will determine wind speed using a recording anemometer located a minimum of 10 feet above ground level near the on-site project office.
5. Ground vibrations, noise level, and air over-pressure will be monitored during each blast for compliance with the limits outlined in 30 CFR 816.67(b)(1)(i) and 816.67(d)(2)(i). Following each blast, seismographs will be checked to ensure that

the blasting has not exceeded applicable noise and vibration criteria at the residential structures within 600 feet of the blast activity. In compliance with 30 CFR 816.7 (d)(2)(ii), the blast log will include a seismographic record of each blast. If residents request, homes within 600 feet of the blasting operations will be inspected for damage. All daily seismograph reports shall be maintained by the blaster for 3 years from the blasting.

6. The blaster shall retain an inspector to inspect all buildings and structures, including mobile homes, within 300 feet of the blast site before blasting operations, unless inspection is waived by the owner and/or occupant.
7. An inspector shall complete and sign pre-blast inspection reports identifying all findings and inspection waivers.
8. The blaster shall retain an inspector to conduct a post-blast-inspection of any building and structure for which a written complaint alleging blast damage has been received. A written report of the inspection shall be immediately filed with the Issuing Officer and provided to any person who made a complaint for damages.
9. All major blasting operations shall be monitored by an approved seismograph located at the nearest structure within 600 feet of the blasting operation.

**PDF-N-2** **Blasting Plan.** Prior to and during construction activities, the applicant shall be required to prepare and implement a blast plan to reduce impacts associated with air blast over-pressure generated by project-related construction activities and to incorporate any required noise reducing measures to comply with County Noise Ordinance regulations.

All blast planning shall be done by a San Diego County Sheriff approved blaster, with the appropriate San Diego County Sheriff blasting permits, and all other applicable local, state, and federal permits, licenses, and bonding. The blasting contractor or owner shall conduct all notifications, inspections, monitoring, major or minor blasting requirements planning, with seismograph reports as necessary.

Construction equipment associated with blasting (i.e., drilling, pre and post blasting work) shall comply with the County Noise Ordinance, Sections 36.408, 36.409, and 36.410. The blast plan shall include any necessary noise measures such as (but not limited to) temporary noise barriers and blankets, increased setbacks, limiting construction equipment operations, and any other methods specified within the blasting plan must be implemented to comply with County Noise Ordinance requirements.

## 2.5.7 Conclusion

The following discussion provides a summary of the conclusions reached in each of the above impact analyses and the level of impact that would occur after mitigation measures and project design features, if any, are implemented.

### *2.5.7.1 Noise-Sensitive Land Uses Affected by Airborne Noise*

The operational noise levels from the stationary equipment of the project, which would potentially affect the permanent ambient noise levels, would not exceed the County's guidelines for determining significance (County of San Diego 2009a) as they would not increase ambient levels by more than 10 dBA CNEL or exceed 45 dBA CNEL at any NSLU. However, if the equipment were to change and/or the layout differs from what was analyzed in the noise analysis report (see Appendix J.1), operational noise levels have the

potential to exceed the County Noise Ordinance threshold (**Impact N-1**). Mitigation measure **M-N-1** would ensure predicted stationary equipment operation noise levels would be compliant with the applicable County Noise Ordinance nighttime noise level standard at the project property lines and at the nearest NSLU per the County's guidelines for determining significance with respect to a CNEL standard.

Implementation of mitigation measure **M-N-1** would ensure the project would comply with the County Noise Ordinance Section 36.404, and impacts from noise caused by stationary equipment (**Impact N-1**) would be reduced to **less than significant**.

### 2.5.7.2 Project-Generated Airborne Noise, Construction and Decommissioning

If project construction phases or other activities overlap in schedule or otherwise occur concurrently, the project does have the potential to exceed these thresholds and impacts may be **potentially significant** (**Impact N-2**). Mitigation measure **M-N-2** would ensure construction and decommissioning noise emission is compliant with County standards. With implementation of mitigation measure **M-N-2,** impacts from construction-related noise (**Impact N-2**) would be reduced to **less than significant**. Additionally, should project's construction phases or other activities overlap in schedule or otherwise occur concurrently, the CNMP as outlined in **M-N-2** would include specified distance restrictions that when implemented would help ensure such concurrence does not cause logarithmically combined noise levels to exceed the County's standard per Section 36.409 of the County Noise Ordinance. Lastly, the noise-reduction measures required by **M-BI-10** would further reduce noise levels during project construction.

### 2.5.7.3 Project-Generated Airborne Noise, Operation

Operational noise, primarily due to the transformers and battery storage containers, including HVAC units, would not exceed the County Noise Ordinance standards at the project property lines; therefore, the project would result in a **less than significant** impact from operational noise.

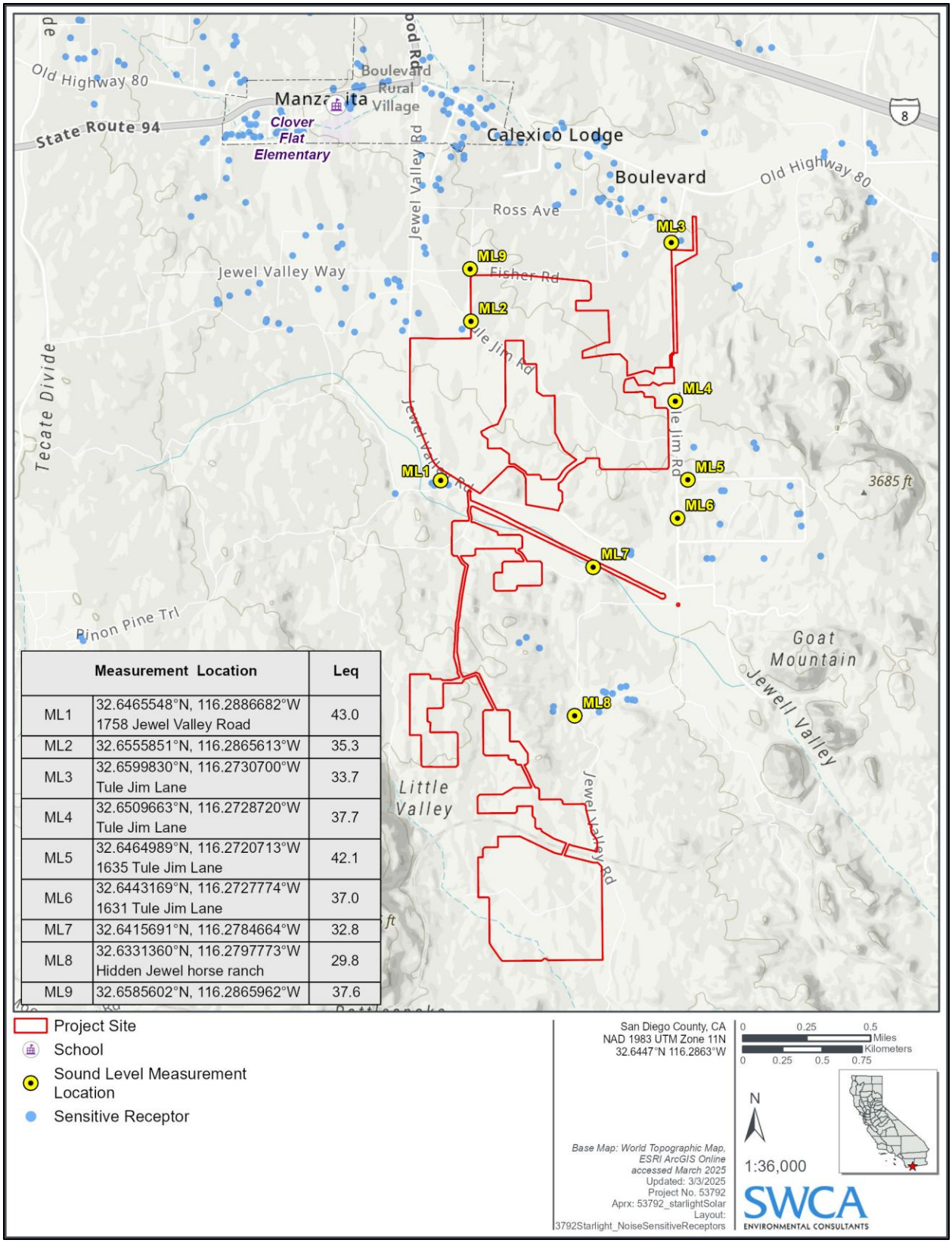
### 2.5.7.4 Ground-borne Vibration Impacts

The primary source of vibration from the project would be from blasting. Blasting would occur no more than once per day. Ground vibrations, noise level, and air over-pressure would be monitored during each blast for compliance with the limits established by 30 CFR 816.67(b)(1)(i) and 816.67(d)(2)(i). Following each blast, seismographs shall be checked to ensure that the blasting has not exceeded applicable noise and vibration criteria at the residential structures within 600 feet of the blast activity. The blasting contractor will ensure compliance with 30 CFR 816.67(b)(1)(i) and 816.67(d)(2)(i). Therefore, construction of the project would result in **less than significant** impacts due to blasting.

### 2.5.7.5 Cumulatively Considerable Impacts

Noise levels tend to diminish quickly with distance from a source; therefore, the geographic scope for the analysis of cumulative impacts related to noise would be limited to projects within approximately 0.25 mile of project components and access routes. This area is defined as the geographic extent of the cumulative impact area because noise impacts would generally be localized, mainly within approximately 500 feet from any noise source; however, it is possible that noise from different sources within 0.25 mile of each other could combine to create a significant impact to receptors at any point between the projects. At distances greater than 0.25 mile, construction noise would be briefly audible and steady construction noise from the project would generally dissipate into quiet background noise levels. The temporal scope for cumulative impacts associated with noise would include the construction and operation phases of the project. The baseline for assessing cumulative noise impacts includes the noise sources associated with

other projects within 0.25 mile of the project that could be constructed and/or operated at the same time as the project. Based on the foregoing criteria, the only cumulative project included in this cumulative analysis is the Tule Wind Groundwater Permitting Project which includes a generation-tie line to the Boulevard substation, although the majority of the project is located further northeast. The Tule Wind Groundwater Permitting Project is operational, and its current phase includes groundwater monitoring. As such, it has no significant noise impacts; therefore, the project's contribution **would not be cumulatively considerable**.




| Measurement Location | | Leq |
|---|---|---|
| ML1 | 32.6465548°N, 116.2886682°W 1758 Jewel Valley Road | 43.0 |
| ML2 | 32.6555851°N, 116.2865613°W | 35.3 |
| ML3 | 32.6599830°N, 116.2730700°W Tule Jim Lane | 33.7 |
| ML4 | 32.6509663°N, 116.2728720°W Tule Jim Lane | 37.7 |
| ML5 | 32.6464989°N, 116.2720713°W 1635 Tule Jim Lane | 42.1 |
| ML6 | 32.6443169°N, 116.2727774°W 1631 Tule Jim Lane | 37.0 |
| ML7 | 32.6415691°N, 116.2784664°W | 32.8 |
| ML8 | 32.6331360°N, 116.2797773°W Hidden Jewel horse ranch | 29.8 |
| ML9 | 32.6585602°N, 116.2865962°W | 37.6 |

**Figure 2.5-1. Sound Level Measurement Locations**