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Noise and Ground Vibration Technical Report Soda Mountain Solar Project San Bernardino County, California

JUNE 2024

PREPARED FOR

Soda Mountain Solar, LLC

PREPARED BY

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SWCA

NOISE AND GROUND VIBRATION TECHNICAL REPORT
SODA MOUNTAIN SOLAR PROJECT
SAN BERNARDINO, CALIFORNIA

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1 INTRODUCTION

SWCA Environmental Consultants (SWCA) prepared this noise and ground vibration technical report to evaluate and describe the potential noise and vibration impacts of the proposed Soda Mountain Solar Project (project). The project would be developed by Soda Mountain Solar, LLC (applicant). The project site is located in San Bernardino County, California, approximately 50 miles northeast of Barstow.

The purpose of this report is to present the analysis and noise impact estimates for the construction and operation of the project. The analysis outlines the existing noise environment at the project site, estimates future noise and vibration levels at neighboring locations as a result of the project's construction and operation, and evaluates the potential for significant impacts. Also provided is an assessment of the project's contribution to potential cumulative noise impacts. Based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines, this study has been prepared to satisfy applicable San Bernardino County standards and significance threshold. This is due to the nearest noise sensitive area (NSA) being located within San Bernardino County. The Bureau of Land Management (BLM) does not have standards to evaluate noise impacts.

2 PROJECT LOCATION AND DESCRIPTION

2.1 Project Location

The project is located entirely on federally owned land managed by the BLM. The 2,670-acre project site is located approximately 7 miles southwest of the community of Baker in unincorporated San Bernardino County, California (Figure 1), approximately 50 miles northeast of Barstow.

The project is bounded directly to the east by the Mojave National Preserve (administered by the National Park Service) and BLM lands, including the Rasor Off-Highway Vehicle (OHV) recreation area at the southeast corner. Interstate 15 (I-15), the former Arrowhead Trail Highway, runs along the western boundary of the project site, with Rasor Road Services Shell Oil gas station located off I-15 southwest of the project site, along the access road to the project site (Figure 2). Approximately six storm drain culverts run under I-15 adjacent to the project site. Primary access to the project site is from a north-bound exit off I-15.

Infrastructure surrounding the site includes the four-lane I-15, two high-voltage electric transmission lines, an electrical distribution line, wireless cellular telephone towers, two fiber-optic cables, and two fuel pipelines. The two high-voltage electrical transmission lines to the west of I-15 are a 115-kilovolt (kV) sub-transmission line owned by Southern California Edison and the Marketplace-Adelanto 500-kV transmission line operated by the Los Angeles Department of Water and Power.

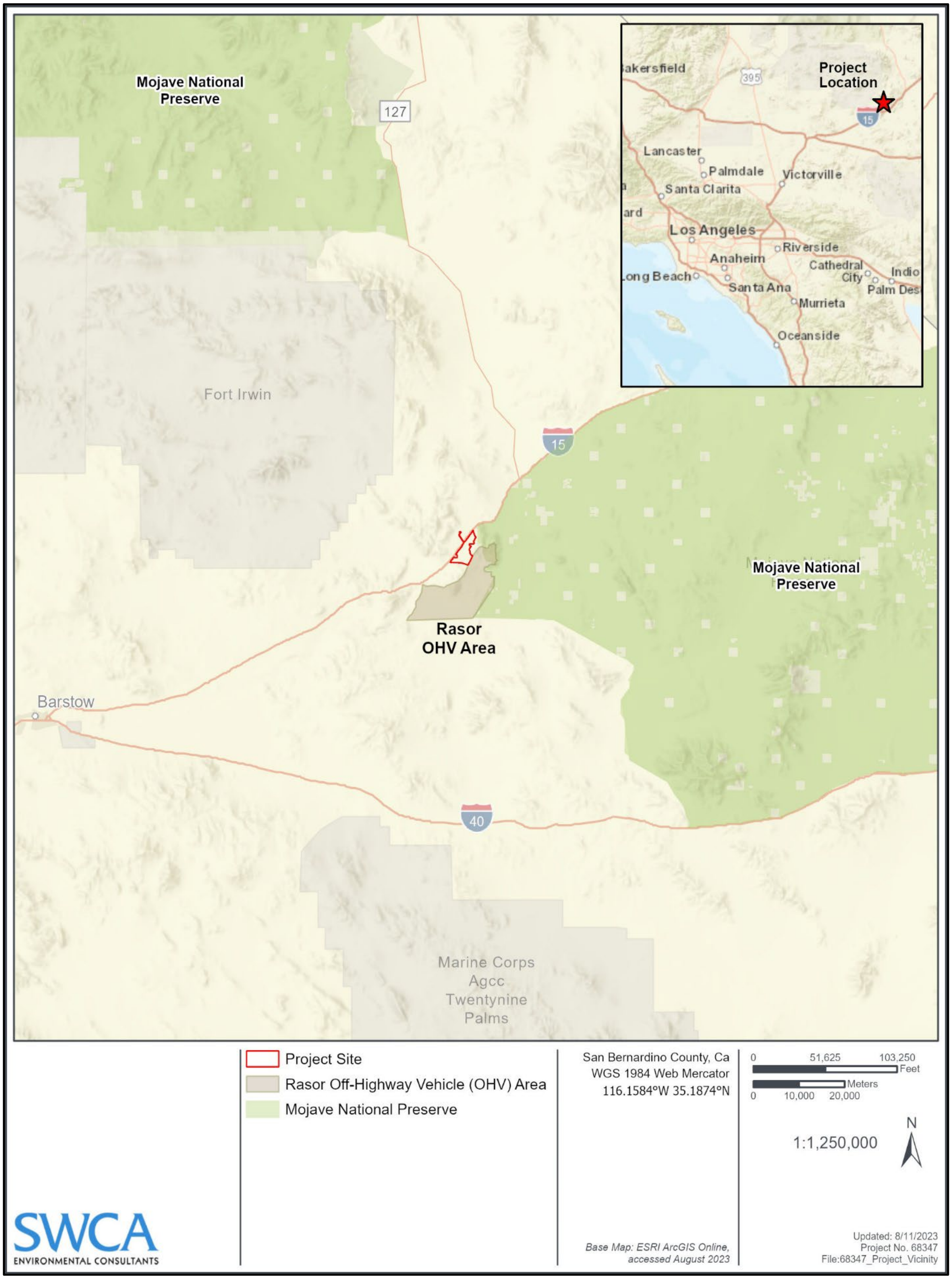


Figure 1. Project site vicinity.

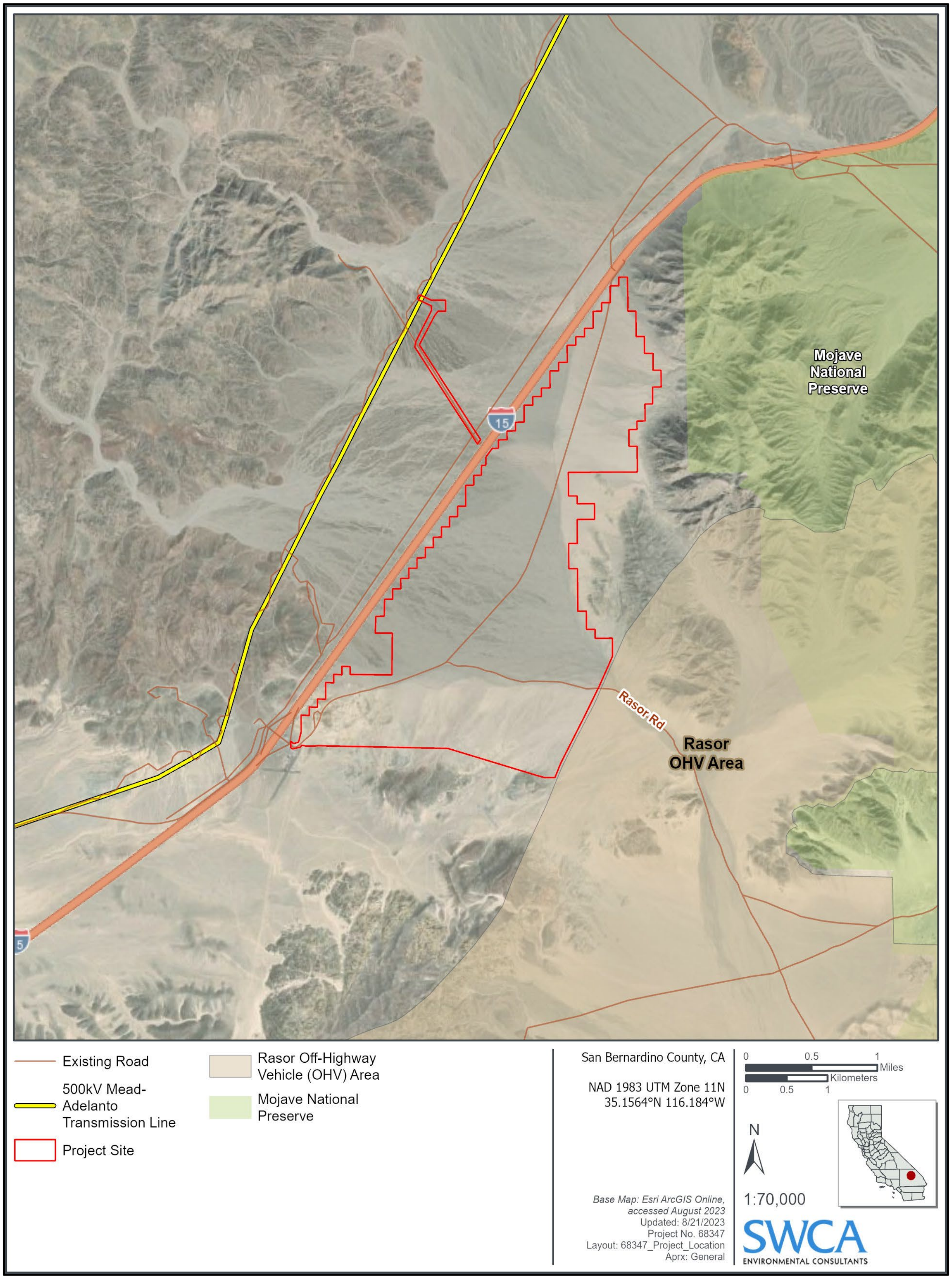


Figure 2. Project site location.

2.2 Project Description

The project proposes to construct, operate, maintain, and decommission a utility-scale solar photovoltaic (PV) electrical generating and storage facility and associated infrastructure on approximately 2,670 acres. The project would generate up to 300 megawatts (MW) of renewable energy and include up to 300 MW of battery energy storage system (BESS). The project components are as follows:

1. The solar plant site (i.e., all facilities that create a footprint in and around the field of solar panels, including the solar field consisting of solar power arrays identified as the East Array and South Arrays 1, 2, and 3), operation and maintenance buildings and structures, stormwater infrastructure, and related infrastructure and improvements.
2. A substation and switchyard for interconnection to the existing transmission system.
3. Approximately 300 MW of BESS across 18 acres.

The project would operate 24 hours per day year-round and would generate electricity during daylight hours when the sun is shining. The power produced by the project would be conveyed to the regional electrical grid through an interconnection with the existing Marketplace-Adelanto 500-kV transmission line operated by the Los Angeles Department of Water and Power. The project also includes future decommissioning, which is anticipated to occur after 30 years of operation.

2.3 Construction Scheduling and Phasing

Construction of the project, from mobilization to the site to final completion, is expected to occur between 2025 and 2026, and would last for approximately 18 months. The approximate disturbance acreage for the project would be 2,081 acres.

The project would be constructed in three stages:

1. Mobilization, site preparation, fencing, preparation of laydown areas, and trenching.
2. Installation of solar array structural components including cables, piles, racking systems, inverters, and modules.
3. Installation of solar panels, battery storage systems, commissioning, and testing.

The estimated construction scheduling for the project is presented in Table 1.

Table 1. Construction Schedule

Phase	Start Date	End Date	Hours/Workday	Days/Week	Workdays per Phase
Stage 1	3/1/2025	10/31/2025	10	5	175
Stage 2	6/1/2025	2/18/2026	10	5	195
Stage 3	12/1/2025	8/31/2026	10	5	196

3 ENVIRONMENTAL SETTING

3.1 Noise Fundamentals

This section provides a brief overview of noise fundamentals, noise assessment components, and examples of sound levels from a variety of sources.

3.1.1 Definition of Acoustical Terms

Noise is commonly defined as sound that is undesirable because it interferes with speech communication and hearing, causes sleep disturbance, or is otherwise annoying. The following acoustical terms are used throughout this analysis:

- Ambient sound level is defined as the composite of noise from all sources near and far, i.e., the normal or existing level of environmental noise at a given location.
- Decibel (dB) is the physical unit commonly used to measure sound levels. Technically, a dB is a unit of measurement that describes the amplitude of sound equal to 20 times the base 10 logarithm of the ratio of the reference pressure to the sound of pressure, which is 20 micropascals (µPa).
- Sound measurement is further refined by using an A-weighted decibel (dBA) scale that more closely measures how a person perceives different frequencies of sound; the A-weighting reflects the sensitivity of the ear to low or moderate sound levels.
- Equivalent noise level (Leq) is the energy average A-weighted noise level during the measurement period.
- The root-mean-squared maximum noise level (Lmax) characterizes the maximum noise level as defined by the loudest single noise event over the measurement period.
- Day-night average noise level (Ldn) is the A-weighted equivalent sound level for a 24-hour period with an additional 10-dB weighting imposed on the equivalent sound levels occurring during nighttime hours (10:00 p.m. to 7:00 a.m.).
- Community noise equivalent level (CNEL) is a measure of the 24-hour average noise level that penalizes noise that occurs during the evening and nighttime hours, when noise is considered more disturbing. To account for this increase in disturbance, 5 dBA is added to the hourly Leq during the evening hours (7:00 p.m. to 10:00 p.m.) and 10 dBA is added during the nighttime hours (10:00 p.m. to 7:00 a.m.).
- Percentile-exceeded sound level (Lxx) describes the sound level exceeded for a given percentage of a specific period.

3.1.2 Sound Levels of Representative Sounds and Noises

The U.S. Environmental Protection Agency (EPA) has devised an index for evaluating the impact of noise originating from various sources when affecting residential areas. In tranquil rural settings during nighttime, noise typically registers between 32 and 35 dBA. In urban areas with low noise levels during the nighttime, readings typically fall within the range of 40 to 50 dBA. In bustling urban areas during daylight hours, noise levels can frequently escalate to as high as 70 to 80 dBA. Noise levels exceeding 110 dBA are considered unmanageable, while continuous exposure to levels exceeding 80 dBA can lead to hearing impairment. Levels surpassing 70 dBA are often linked to disruptions in tasks, and noise levels ranging from 50 to 55 dBA typically correspond to raised voices during a regular conversation (EPA 1974).

Table 2 provides criteria that have been used to estimate an individual's perception to increases in sound. In general, an average person perceives an increase of 3 dBA or less as barely perceptible. An increase of 10 dBA is perceived as a doubling of the sound.

Table 2. Average Human Ability to Perceive Changes in Sound Levels

Increase in Sound Level (dBA)	Human Perception of Sound
2–3	Barely perceptible
5	Readily noticeable
10	Doubling of the sound
20	Dramatic change

Source: Bolt, Beranek and Newman, Inc. (1973)

Note: Perception levels apply to noise experienced in an urban or natural environment, not in a controlled auditory lab.

Table 3 presents sound levels for some common noise sources and the human response to those decibel levels.

Table 3. Sound Levels of Representative Sounds and Noises

Common Outdoor Activities	**Noise Level** (dBA)	**Common Indoor** Activities
	— 110 —	Rock band
Jet fly-over at 1,000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 miles per hour		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	**— 70 —**	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	**— 60 —**	
		Large business office
Quiet urban daytime	**— 50 —**	Dishwasher next room
Quiet urban nighttime	**— 40 —**	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	**— 0 —**	Lowest threshold of human hearing

Source: California Department of Transportation (2018)

3.1.3 Noise Assessment Components

A noise assessment is based on the following components: a sound-generating source, a medium through which the source transmits, the pathways taken by these sounds, and an evaluation of the proximity to noise receptors. Soundscapes are affected by the following factors:

1. Source. The sources of sound are any generators of small back-and-forth motions (i.e., motions that transfer their motional energy to the transmission path where it is propagated). The acoustic characteristics of the sources are very important. Sources must generate sound of sufficient strength, approximate pitch, and duration so that the sound may be perceived and can cause adverse effects, compared with the natural ambient sounds.
2. "Transmission path" or medium. The "transmission path" or medium for sound or noise is most often the atmosphere (i.e., air). For the noise to be transmitted, the transmission path must support the free propagation of the small vibratory motions that make up the sound. Atmospheric conditions (e.g., wind speed and direction, temperature, humidity, precipitation) influence the attenuation of sound. Barriers and/or discontinuities (e.g., existing structures, topography, foliage, ground cover, etc.) that attenuate the flow of sound may compromise the path. For example, sound will travel very well across reflective surfaces such as water and pavement but can attenuate across rough surfaces (e.g., grass, loose soil).
3. Proximity to noise-sensitive receptors. A noise -sensitive receptor is usually defined as a location where a state of quietness is a basis for use or where excessive noise interferes with the normal use of the location. Typical receptors include residential areas, monuments, schools, hospitals, churches, and libraries.

3.2 Ground-borne Vibration Fundamentals

This chapter describes basic concepts related to ground-borne vibration. Ground-borne vibration is a small, rapidly fluctuating motion transmitted through the ground. When seismic waves are perceptible (when they can be felt), they are called "ground vibrations." Seismic waves are divided into two classes: body waves and surface waves.

1. Body waves travel across the mass of the rock, penetrating down into the interior of the rock mass. There are two forms of body waves: compressional waves and shear waves.
   The compressional wave (P-wave) is a push-pull-type wave that produces alternating compression and dilatation in the direction of wave travel. The shear wave (S-wave) is produced when the medium particles oscillate perpendicular to the propagation direction.
2. Surface waves (L-waves) travel over the surface of rock mass but do not travel through it. Surface waves are generated by body waves that are constrained by physical and geometrical conditions from traveling into the rock mass. Surface waves are the large energy carriers and account for the largest ground motions. There are two fundamental types of surface waves: the Raleigh, and the Love waves (Q-wave). Raleigh and Love waves represent the energy measured by a seismograph and are the main component of vibration when examining ground vibration from blasting activities.

The ground vibration from surface waves is measured as the velocity of motion, or how many inches per second the ground is moving. The motion of the ground particles (vibration) happens in three dimensions: radial, transverse, and vertical. During vibration, each particle has a velocity, and the maximum velocity is referred to as the peak particle velocity (PPV). The resulting vector of all three components (i.e., radial, transverse, and vertical) combined is referred to as peak vector sum (PVS).

The industry standard is to use the readings of the PPV as the metric to measure the intensity of the ground vibration. In reporting, the maximum measurement of any of the three components is used rather than the resulting PVS.

3.2.1 Ground Vibration Terms

Ground vibration is described using the following terms:

- Acceleration: the rate at which particle velocity changes
- Displacement: The farthest distance that the ground moves before returning to its original position.
- Frequency: the number of oscillations per second that a particle makes when under the influence of seismic waves
- Hertz (Hz): the unit of acoustic or vibration frequency representing cycles per second
- Peak particle velocity (PPV): the greatest particle velocity associated with an event
- Peak vector sum (PVS): the square root of the sum of the squares of the individual PPV values in all three vector directions
- Particle velocity: the velocity at which the ground moves
- Propagation velocity: the speed at which a seismic wave travels from the blast
- Root mean square (RMS): the square root of the mean-square value of an oscillating waveform, where the mean-square value is obtained by squaring the value of amplitudes at each instant of time and then averaging these values over the sample time.
- Vibration velocity level (LV): ten times the common logarithm of the ratio of the square of the amplitude of the RMS vibration velocity to the square of the amplitude of the reference RMS vibration velocity.

3.2.2 Ground Vibration and Structure Damage

Ground vibrations have the capacity to induce lasting alterations in the positions of the constituent "particles" making up structures. These enduring alterations, which are undesirable, are informally termed as "damage." The magnitude of the vibration, signifying higher ground movement speeds, amplifies the likelihood of these lasting shifts in particle positions within structures. Table 4 provides an overview of the impacts of PPVs on structures and materials.

Table 4. Vibration Damage Potential Threshold Criteria

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

Note: Modified from Table 19, Guideline Vibration Damage Potential Threshold Criteria (California Department of Transportation 2020).

While ground vibrations can potentially lead to structural damage, observable damage from vibrations often manifests as visible cracks in materials like drywall, plaster, and exterior surfaces such as grout and stucco. It is important to note that such damage may or may not signify structural issues. Cosmetic damage of this nature can also result from factors like settling, temperature fluctuations, and the natural aging of a building. Consequently, the presence of a few hairline cracks in a house does not necessarily imply that vibrations are the root cause.

3.2.3 Ground Vibration and Human Perception

Beyond concerns related to structural damage, ground vibrations can, under specific conditions, startle or irritate individuals. Assessing human reactions to vibration is challenging due to variations in individual perception. Humans can detect ground vibrations at lower levels than those discussed in Section 4.2.2, which can potentially affect structures negatively. The human body is capable of distinctly sensing ground vibrations as low as 0.1 inch per second, and some individuals may even perceive lower levels.

The reason the general public might find ground vibration annoying is that it represents an A-Cultural Vibration, an experience people are unaccustomed to. For instance, vibrations generated by explosions are unique and unexpected, prompting individuals to report them to a greater extent (Konya 2019). Furthermore, the rattling of objects in the immediate vicinity can lead occupants to inspect their homes for cracks, as suggested by Dowding (1996). Table 5 indicates the average human response to vibration that may be anticipated when the person is at rest, situated in a quiet surrounding.

Table 5. Human Response to Ground Vibration

Average Human Response	PPV (inches/second)
Barely to distinctly perceptible	0.020–0.10
Distinctly to strongly perceptible	0.10–0.50
Strongly perceptible to mildly unpleasant	0.50–1.00
Mildly to distinctly unpleasant	1.00–2.00
Distinctly unpleasant to intolerable	2.00–10.00

Source: California Department of Transportation (2020)

3.2.4 Vibration Assessment Components

Vibration energy extends out as it travels through the ground, causing the vibration level to reduce with respect to the distance from the source. High-frequency vibration decreases much more rapidly than low frequencies, so that low frequencies tend to dominate the spectrum at large distances from the source. The propagation of ground-borne vibration is not simple to model due to geological differences in the medium (ground). Geological factors that may influence the propagation of ground-borne vibration include the following:

- Soil conditions. The type of soil has a strong influence on the propagation of ground-borne vibration. Hard, dense, and compacted soil, stiff clay soil, and hard rock transfer vibration more efficiently than loose, soft soils, sand, or gravel.
- Depth to bedrock. Shallow depth to bedrock provides more efficient propagation of ground-borne vibration. Shallow bedrock concentrates the vibration energy near the surface, reflecting vibration waves back toward the surface that would otherwise continue to propagate farther down into the earth.

- Soil strata. Discontinuities in the soil layering can produce diffractions or channeling effects that impact the propagation of vibration over long distances.
- Frost conditions. Seismic waves typically propagate more efficiently in frozen soils than in unfrozen soils.
- Water conditions. The amount of moisture in the soil has an impact on vibration propagation. The depth of the water table in the path of the propagation also has substantial effects on ground-borne vibration levels.

Vibration levels can also be influenced by conditions at both the source and receptor locations. For instance, the way the source is linked to the ground (e.g., direct contact or through a structure) or whether the source is situated underground as opposed to on the surface will determine the extent of energy transferred into the ground. Similarly, at the receptor location, variables like building construction and the type of foundation can influence vibration levels.

3.3 Existing Conditions

3.4 Existing Land Use and Site Conditions

Lands adjacent to the project site serve different purposes, including residential spaces, ranching, and other private and public functions. Additionally, activities such as hiking, camping, stargazing, and photography are popular within the Mojave National Preserve. Furthermore, the Rasor Off-Highway Vehicle recreation area is a popular destination for off-road enthusiasts.

In terms of climate, the project site primarily has a desert climate. Like much of the Mojave Desert, it sees significant temperature fluctuations. Summer daytime temperatures can easily surpass 100°F (38°C), while winter temperatures can be quite chilly, especially at higher elevations. The region receives limited precipitation, averaging around 6 inches annually, though this can vary based on location.

3.4.1 Sensitive Receptors

People's reactions to noise can differ significantly. Noise at various intensities can disrupt sleep, focus, and communication, and might lead to stress, both physiological and psychological, and even hearing damage. As a result, certain land uses are seen as more vulnerable to environmental noise than others. Residences, schools, hotels, hospitals, and nursing homes, for instance, are usually perceived as highly noise sensitive. Locations like churches, libraries, and cemeteries, where individuals typically engage in prayer, study, or reflection, are also affected by noise. On the contrary, commercial and industrial areas are generally deemed least affected by noise.

The proposed project location is not situated close to any non-residential areas that might be sensitive to noise, such as schools, hospitals, daycare centers, or long-term care establishments. The nearest schools, Baker Elementary, Middle, and High Schools, are over 6.5 miles away, situated in the northeastern part of Baker. The closest residences to the project location (referenced hereafter as monitoring location ST-1) can be found next to the Rasor Road service station, roughly 260 feet southwest of the proposed boundary.

Moreover, the Desert Studies Center of California State University is approximately 3.5 miles east of the project site, positioned on Zzyzx Road. This center serves as a hub for research and education, capable of hosting up to 75 people in dormitory-style rooms designed for two to 12 occupants. The Rasor Open

Area, which lies about 2.5 miles south of the proposed boundary, offers camping facilities and can be accessed via the Rasor Road exit from I-15.

3.5 Existing Sound Conditions

3.5.1 Measurement Locations

To determine the baseline or ambient sound levels experienced near the project site and at the closest NSAs, long-term and short-term sound monitoring was conducted from January 17 to January 18, 2023, to document the acoustic environment in the area surrounding the proposed project.

One long-term and one short-term noise monitoring location were selected to provide the existing ambient noise levels near and at the project's site. The specific placement of the sound level meters was mainly determined by environmental and logistical constraints, and the location of the closest NSAs. The long-term noise monitor was placed at the northeast corner of the proposed project site. The short-term monitor was placed at the neighboring noise-sensitive land use and commercial location (residential home and gas station) to provide good coverage of the area surrounding the project site. Figure 3 shows the location of the two noise measurement locations. Table 6 describes the selected noise monitoring sites.

Table 6. Noise Monitoring Locations

Monitoring Location	Description	Approximate Distance from Measuring Location to Nearest Project Site Boundary*
LT-1	Near dirt road within project boundary	Within project site
ST-1	Residence near gas station and I-15	0.1 mile southwest

* Distance is estimated using 2023 map data from Google Earth (2024).

3.5.2 Instrument Description

Noise measurements were collected using one Larson Davis Precision Integrating Sound Level Meter Model 831C unit, meeting the requirements of the American National Standards Institute (ANSI) (2013), three PCB PRM831 preamplifiers, and three PCB 377B02 free-field microphones (Table 7).

The microphone was fitted with an environmental windscreen and bird spikes and set on a tripod at a height of 5 feet above ground and located as far from the influence of vertical reflective sources as possible. All cables were secured to prevent any sounds due to wiring hitting other objects. All clocks associated with the sound measurement were synchronized using the Larson Davis G4 LD Utility software. Field data sheets were completed during each visit and are provided in Appendix A of this report.

Table 7. Instrumentation Used

Monitoring Location	Sound Level Meter	Preamplifier	1/2-inch Free-Field Microphone
LT-1, ST-1	Larson Davis 831C (S/N 0011492)	PRM831 (S/N 071107)	377B02 (S/N 328714)

3.5.3 Calibration Checks

The sound level meter was calibrated at the beginning and end of each measurement period using a Larson Davis Model CAL200 Precision Acoustic Calibrator. The Larson Davis CAL200 emits a 1-kilohertz (kHz) tone at 114 dB against which the response can be checked. The calibrator has been designed for both field and laboratory use, and the accuracy has been calibrated to a reference traceable to the National Institute of Standards and Technology. The LD 831C sound level meters showed a response of less than the normal error of 0.50 dB.

3.5.4 Meteorological Data

Meteorological data were not measured at the monitoring sites during the measurement period. Instead, noise data collected during the survey were validated against weather data from the Lake Wainani Station (KCANEWBE16), located approximately 29.5 miles northeast of the project site. Hourly weather information is presented in Appendix B. A summary of the survey's weather conditions is provided in Table 8.

Table 8. Weather Conditions during the Noise Survey

Weather Station	Start	End	Wind Speed (mph)		Temperature (°F)		Humidity (% relative humidity)	
			Range	Average	Range	Average	Range	Average
Lake Wainani (KCANEWBE16)	1/17/2023 00:00	1/18/2023 23:59	2.56–14.33	8.34	35.58–53.19	44.72	33–80	59

Source: Weather Underground (2023)

The ASTM International *Standard Guide for Measurement of Outdoor A-Weighted Noise Levels* (ASTM E1014-12) (ASTM International 2012) specifies that data should not be used when steady wind speeds exceed 20 kilometers per hour (12.4 miles per hour [mph]). There were four instances (hours) where wind speeds were greater than 12.4 mph, so those data points were not used.

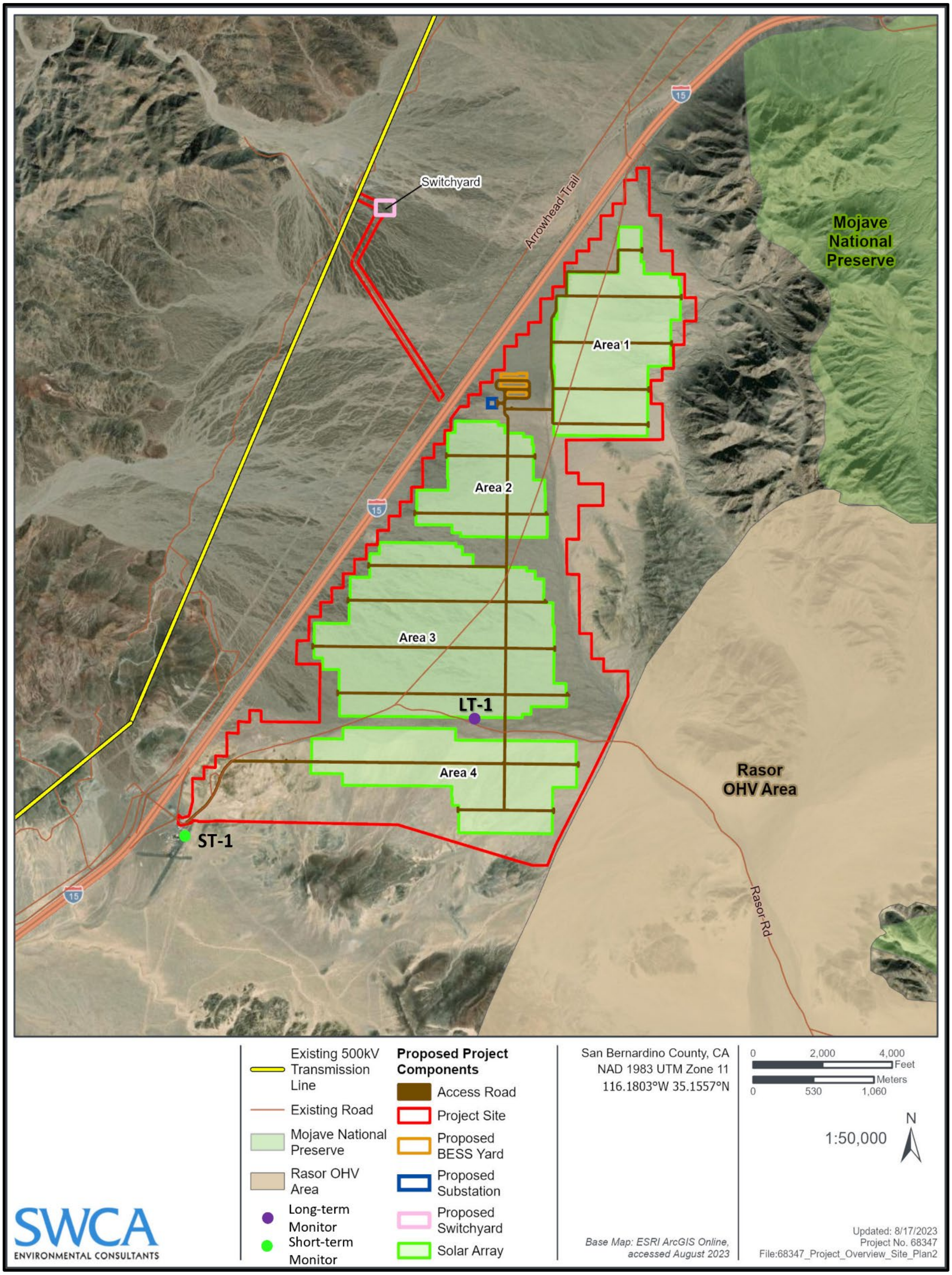


Figure 3. Noise measurement locations.

3.5.5 Readings

Long-term monitoring was conducted from January 17 to January 18, 2023. Sound meter LD 831C – 0011492 was placed at monitoring location LT-1 from 2:06 p.m. (Pacific Daylight Time [PDT]) on January 17 to 2:35 p.m. (PDT) on January 18. Data were collected for approximately 24 hours; sound levels were recorded over each 1-minute and 1-hour interval.

Short-term monitoring was conducted at one monitoring location. Start and stop times for the single short-term monitoring site are presented in Table 9. Short-term sound levels were recorded for a single 15-minute interval.

The sound level meters were programmed to sample and store A-weighted sound level data including Leq, percentile levels, and community sound parameters. The following gives a brief description of the methodology used for the sound data collection.

- An A-weighted sound level was selected.
- During noise measurements, any dominant background noise source was noted.
- Weather conditions were observed and documented.

Observed sources of background noise that contributed to the existing sound level at the monitoring locations included highway noise and trucks idling in a nearby parking lot. No data points were excluded from the results interference as all the major noise-contributing sources were determined to be representative of the ambient soundscape.

Ambient noise levels for the long-term monitoring sites are represented by the equivalent noise level (Leq) due to the duration of the monitoring period, as it provides a measure of the aggregate sound at a location. Leq represents the level of continuous sound over a given period that would deliver the same amount of energy as the actual fluctuating energy levels over the course of the measurement.

3.5.6 Results

Data collection began on January 17 and continued through January 18, 2023. Table 9 summarizes the measured A-weighted Leq, Ldn, and CNEL (calculated from the measured Leq) for each of the monitoring locations.

Table 9. Measured Existing Ambient Noise Levels

Monitoring Location	Start Time	Stop Time	Measured Noise Levels (dBA), Leq				Estimated Noise Levels (dBA)	
			Daytime Hours (7:00 a.m.–7:00 p.m.)	Evening Hours (7:00 p.m.–10:00 p.m.)	Nighttime Hours (10:00 p.m.–7:00 a.m.)	L90 (24-hour)	Ldn* (24-hour)	CNEL* (24-hour)
LT-1	2023-01-17 14:06:48	2023-01-18 14:35:51	43.3	53.5	48.2	44.1	54.6	55.4
ST-1*	2023-01-18 15:04:05	2023-01-18 15:19:23	53.1	-	-	45.7	-	-

* Measurement ST-1 was taken during daytime hours. As a result, no evening or nighttime hours were collected, and Ldn or CNEL could not be calculated.

As shown in Table 9, the daytime noise levels in project vicinity ranged between 43.3 and 53.1 dBA Leq. Appendix C provides histograms of the hourly Leq and L90 levels for the long-term monitor.

3.5.7 Existing Ground-Borne Vibration Levels

The primary ground-borne vibration source at urban settings is vehicular traffic. It is unusual for vibration from traffic sources to be perceptible, as trucks and buses typically generate vibration velocity levels of approximately 63 vibration velocity decibels (VdB) at 50 feet (Federal Transit Administration [FTA] 2018). Normally, 75 VdB is defined as the dividing line between barely perceptible and distinctly perceptible (FTA 2018). It is expected that the existing ground-borne vibration levels at the project vicinity would be below the perceptible level due to the distance from vibration sources (roads).

4 REGULATORY SETTING

Federal, state, and local agencies have set noise and ground-borne vibration regulations and policies to protect the health and welfare of the public, as described below.

4.1 Federal

FTA has established specific vibration impact thresholds to assess the potential effects on noise-sensitive buildings, residences, and institutional land uses.

These thresholds have been designed primarily for evaluating the impacts resulting from the operation of mass transit systems, including heavy and light rail, buses, and similar transportation modes. The vibration impact thresholds specified by the FTA are as follows:

- Residences and buildings where people normally sleep: The threshold for vibration impacts at these locations is set at 80 VdB. This includes nearby residential areas and facilities such as daycare centers, where people reside or regularly sleep.
- Institutional buildings: For institutional buildings such as schools and churches, the threshold for vibration impacts is slightly higher, set at 83 VdB. This recognizes the importance of ensuring minimal disturbance to sensitive activities that take place in such establishments.

When evaluating the potential impacts of ground-borne vibration on buildings and structures, the guidelines provided by FTA are often utilized as a reference. The FTA's *Transit Noise and Vibration Impacts Assessment Manual* serves as a valuable resource in assessing the criteria for determining the potential impact to buildings, particularly during construction activities (FTA 2018).

Table 10 specifically outlines the vibration criteria established by the FTA that are applicable to construction activities. These vibration impact thresholds established by the FTA serve as guidelines for assessing and managing potential impacts from mass transit system operations. They provide a standardized framework to evaluate vibrations and their potential effects on noise-sensitive structures and activities. It is important to note that these specific thresholds developed by the FTA may not directly apply to a solar project located in San Bernardino County, California. However, the nearest NSA to the project is located in San Bernardino County, which has vibration impact thresholds based on FTA thresholds. As a result, these impact thresholds have been used to assess project-related vibrational impacts.

Table 10. Construction Vibration Impact Criteria for Building Damage

Building Category	PPV (inches/second)
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

Source: FTA (2018)

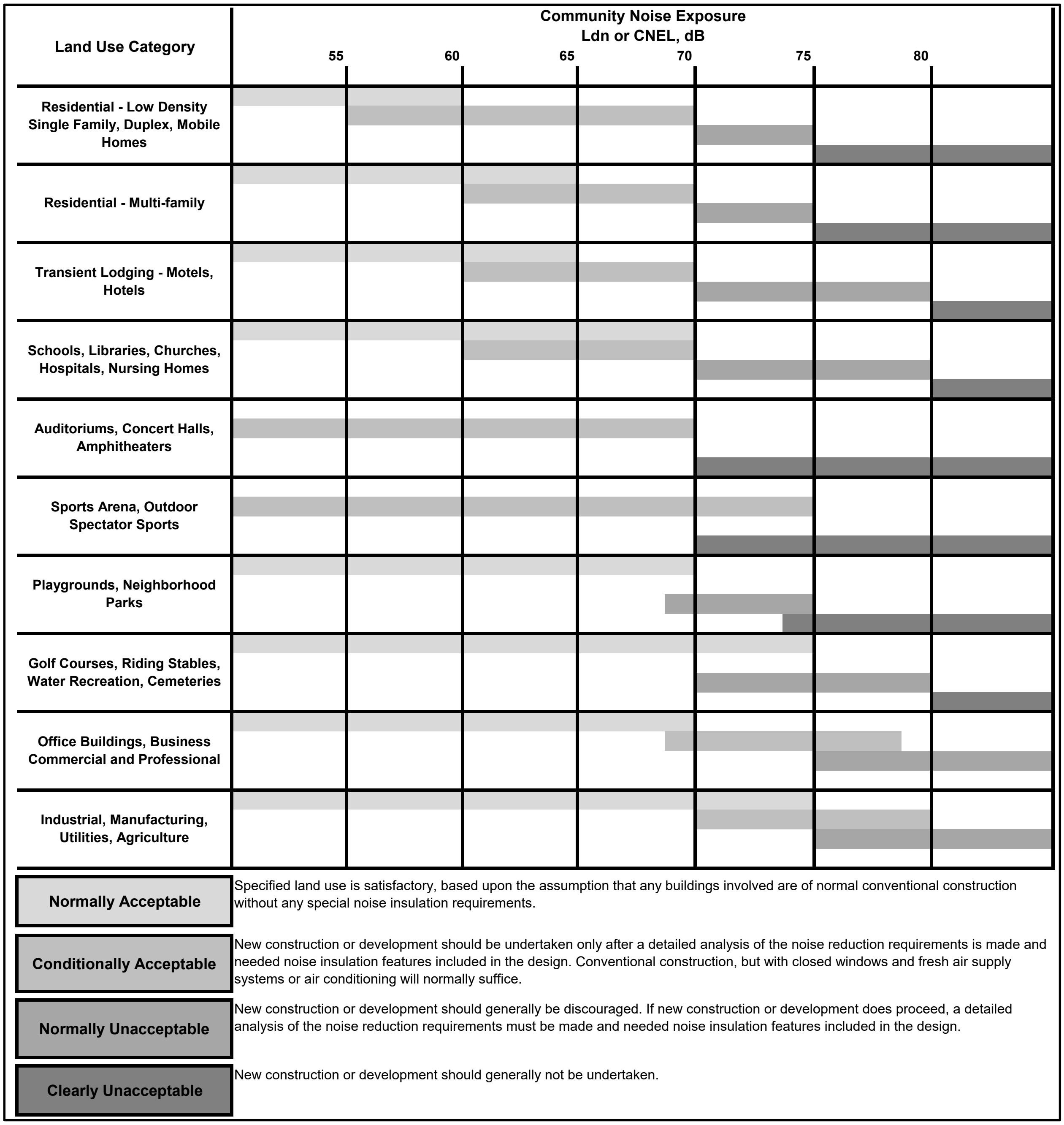
4.2 State

4.2.1 California Government Code Section 65302

The State of California has not adopted statewide regulations or standards for noise. However, the State of California General Plan Guidelines, published and updated by the Governor's Office of Planning and Research (OPR), provides standards and the acceptable noise categories for different land uses (OPR 2017). Figure 4 provides the exterior noise standards associated with the different land uses evaluated by the state.

California also requires each local government entity to perform noise studies and implement a noise element as part of its general plan. The purpose of the noise element is to limit the exposure of the community to excessive noise levels; the noise element must be used to guide decisions concerning land use.

There are no state ground-borne vibration standards that directly apply to the project.



Source: OPR (2017:Appendix D, Figure 2)

Figure 4. Land use compatibility for exterior community noise exposure.

4.3 Local

4.3.1 San Bernardino County General Plan

The aim of San Bernardino County's General Plan Noise Element is to reduce the community's exposure to high noise levels. This element includes objectives, guidelines, and initiatives that are essential for guiding decisions related to land uses often associated with high noise levels. Although the project is located on BLM land, the nearest NSA identified is located in San Bernardino. As a result, the San Bernardino County guidelines were used to assess project related noise and vibration impacts. The most relevant noise guidelines from the General Plan for the intended project are detailed below. The following policies (quoted directly) identified in the San Bernardino County Sitewide Plan are relevant to this analysis (San Bernardino County 2022).

Goal HZ-2 Human-generated Hazards People and the natural environment protected from exposure to hazardous waste facilities to protect public health and avoid impacts on the natural environment.

Policy HZ-2.6 Coordination with transportation authorities. We collaborate with airport owners, FAA [Federal Aviation Administration], Caltrans [California Department of Transportation], SBCTA [San Bernardino County Transportation Authority], SCAG [Southern California Association of Governments], neighboring jurisdictions, and other transportation providers in the preparation and maintenance of, and updates to transportation-related plans and projects to minimize noise impacts and provide appropriate mitigation measures.

Policy HZ-2.8 Proximity to noise generating uses. We limit or restrict new noise sensitive land uses in proximity to existing conforming noise generating uses and planned industrial areas.

Policy HZ-2.9 Control sound at the source. We prioritize noise mitigation measures that control sound at the source before buffers, soundwalls, and other perimeter measures.

Policy HZ-2.10 Agricultural operations. We require new development adjacent to existing conforming agricultural operations to provide adequate buffers to reduce the exposure of new development to operational noise, odor, and the storage or application of pesticides or other hazardous materials.

4.3.2 San Bernardino County Code

The County of San Bernardino Municipal Code establishes the following applicable standards related to noise.

83.01.010 Purpose

The purpose of this Chapter is to establish uniform performance standards for development within the County that promotes compatibility with surrounding areas and land uses.

Performance standards are designed to mitigate the environmental impacts of existing and proposed land uses within a community. Environmental impacts include air quality, glare, heat, noise, runoff control, and waste disposal. These general performance standards are intended to protect the health and safety of businesses, nearby residents, and workers and to prevent damaging effects to surrounding properties.

83.01.080 Noise

This Section establishes standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses.

a) *Noise Measurement.* Noise shall be measured:

1. At the property line of the nearest site that is occupied by, and/or zoned or designated to allow the development of noise sensitive land uses;
2. With a sound level meter that meets the standard of the American National Standards Institute (ANSI Section S14-1979, Type 1 or Type 2);

3. Using the "A" weighted sound pressure level scale in decibels (ref. pressure = 20 micronewtons per meter squared). The unit of measure shall be designated as dB(A).

b) *Noise Impacted Areas.* Areas within the County shall be designated as "noise-impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Subdivision (d) (Noise Standards for Stationary Noise Sources) and Subdivision (e) (Noise Standards for Adjacent Mobile Noise Sources), below. New development of residential or other noise-sensitive land uses shall not be allowed in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to these standards. Noise-sensitive land uses shall include residential uses, schools, hospitals, nursing homes, religious institutions, libraries, and similar uses.

c) Noise Standards for Stationary Noise Sources.

4. Noise Standards. Table 83-2 [Table 11 in this report] describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties:

Table 11. County of San Bernardino Noise Standards for Stationary Noise Sources

Affected Land Uses (Receiving Noise)	7 a.m.–10 p.m. Leq	10 p.m.–7 a.m. Leq
Residential	55 dB(A)	45 dB(A)
Professional Services	55 dB(A)	55 dB(A)
Other Commercial	60 dB(A)	60 dB(A)
Industrial	70 dB(A)	70 dB(A)

Source: County of San Bernardino, 2022

5. Noise Limit Categories. No person shall operate or cause to be operated a source of sound at a location or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by the person, which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following:

   A) The noise standard for the receiving land use as specified in Subdivision (b) (Noise-Impacted Areas), above, for a cumulative period of more than 30 minutes in any hour.

   B) The noise standard plus five dB(A) for a cumulative period of more than 15 minutes in any hour.

   C) The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour.

   D) The noise standard plus 15 dB(A) for a cumulative period of more than one minute in any hour.

   E) The noise standard plus 20 dB(A) for any period of time.

6. *Noise Standards for Adjacent Mobile Noise Sources.* Noise from mobile sources may affect adjacent properties adversely. When it does, the noise shall be mitigated for any new development to a level that shall not exceed the standards described in the following Table 83-3 [Table 12 in this report].

Table 12. County of San Bernardino Noise Standards for Mobile Noise Sources

Land Uses		L_{dn} (or CNEL) dB(A)	
Categories	**Uses**	**Interior (1)**	**Exterior (2)**
Residential	Single and multi-family, duplex, mobile homes	45	60 (3)
Commercial	Hotel, motel, transient housing	45	60 (3)
	Commercial, retail, bank, restaurant	50	N/A
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	65
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	N/A	65

Notes:

(1) The indoor environment shall exclude bathrooms, kitchens, toilets, closets, and corridors.

(2) The outdoor environment shall be limited to: Hospital/office building patios, Hotel and motel recreation areas, Mobile home parks, Multi- family private patios or balconies, Park picnic areas, Private yard of single-family dwellings, School playgrounds

(3) An exterior noise level of up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.

L_{dn} = (Day-Night Noise Level). The average equivalent A-weighted sound level during a 24-hour day obtained by adding 10 decibels to the hourly noise levels measured during the night (from 10 pm to 7 am). In this way L_{dn} takes into account the lower tolerance of people for noise during nighttime periods.

CNEL = (Community Noise Equivalent Level). The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7 p.m. to 10 a.m. and 10 decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m.

Source: County of San Bernardino (2022).

a) *Increases in Allowable Noise Levels.* If the measured ambient level exceeds any of the first four noise limit categories in Subdivision (d)(2), above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category in Subdivision (d)(2), above, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

b) *Reductions in Allowable Noise Levels.* If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in Table 83-2 (Noise Standards for Stationary Noise Sources [Table 11 in this report]) shall be reduced by five dB(A).

c) *Exempt Noise.* The following sources of noise shall be exempt from the regulations of this Section:

1. Motor vehicles not under the control of the commercial or industrial use.
2. Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

d) *Noise Standards for Other Structures.* All other structures shall sound attenuated against the combined input of all present and projected exterior noise to not exceed the criteria.

Table 13. County of San Bernardino Noise Standards for Other Structures

Typical Uses	12-Hour Equivalent Sound Level (Interior) in dBA L_{dn}
Education, institutions, libraries, meeting facilities, etc.	45 dB(A)
General office, reception, etc.	50 dB(A)
Retail stores, restaurants, etc.	55 dB(A)
Other areas for manufacturing, assembly, testing, warehousing, etc.	65 dB(A)

Source: County of San Bernardino (2022)

83.01.090 Vibration

a) *Vibration Standard.* No ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity greater than or equal to two-tenths inches per second measured at or beyond the lot line.

b) Vibration Measurement. Vibration velocity shall be measured with a seismograph or other instrument capable of measuring and recording displacement and frequency, particle velocity, or acceleration. Readings shall be made at points of maximum vibration along any lot line next to a parcel within a residential, commercial and industrial land use zoning district.

c) Exempt Vibrations. The following sources of vibration shall be exempt from the regulations of this Section.

1. Motor vehicles not under control of the subject use.
2. Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

5 THRESHOLDS OF SIGNIFICANCE

5.1 Thresholds of Significance

Based on criteria presented in Appendix G of the CEQA Guidelines, a project would have a significant noise impact if it would result in any one or more of the following:

1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
2. Generation of excessive ground-borne vibration or ground-borne noise levels; or
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure of people residing or working in the project site to excessive noise levels.

Because the project site is not located within an airport land use plan, within 2 miles of a public airport or public use airport, or within the vicinity of a private airstrip, the project would not expose project occupants to excessive airport-related noise. Therefore, impacts related to airport-related noise would not occur and are not evaluated any further in this report.

5.1.1 Short-Term Construction Noise Criteria

The County Code's Section 83.01.080 provides an exemption for construction noise from noise level standards, as long as the noise takes place between 7:00 a.m. and 7:00 p.m., except on Sundays and federal holidays. Nevertheless, the San Bernardino County General Plan and County Code do not set specific numeric limits for acceptable construction noise levels at impacted receiver sites. This absence prevents a clear determination under CEQA of what counts as a *substantial temporary* noise increase.

To assess whether the project might produce significant construction noise levels at external sensitive receiver sites, the construction noise level criteria from the FTA (2018) *Transit Noise and Vibration Impact Assessment Manual* for noise-sensitive residential areas was adopted.

According to the FTA, a daytime exterior construction noise level of 80 dBA Leq is deemed the threshold for noise-sensitive residential zones. For commercial areas, the level is set at 85 dBA Leq, and for industrial zones, the level is set at 90 dBA Leq.

5.1.2 Short-Term Construction Vibration Criteria

The San Bernardino County Development Code, under Section 83.01.090(a), specifies that vibration levels should not exceed 0.2 inch per second when measured at or beyond the property boundary. As such, in assessing the vibration levels resulting from the project's operation and construction, a PPV vibration standard of 0.2 inch per second is applied. Though project components are located on BLM land, the NSA is located in San Bernardino County. As a result, the San Bernardino standards were used to assess vibrational impacts.

5.1.3 Long-Term Operational Noise Criteria

The San Bernardino County Development Code, as specified in Section 83.01.080(c), mandates that noise levels from stationary sources should not surpass 55 dBA Leq from 7 a.m. to 10 p.m. and 45 dBA Leq from 10 p.m. to 7 a.m. at residential areas. Additionally, in line with San Bernardino County’s guidelines, noise levels during operation and maintenance will be assessed in comparison to the existing nighttime baseline noise levels, which currently exceeds the county's nighttime hourly Leq standard of 45 dBA.

Therefore, when evaluating the noise levels stemming from the project's operation and maintenance, a noise level standard of 55 dBA will be considered for both day and nighttime periods.

5.1.4 Traffic Noise Criteria

Relating to roadway noise, a 24-hour average noise level metric (i.e., dBA CNEL) was used to assess noise impacts associated with the project based on the San Bernardino guidelines. An increase of 3-dBA CNEL at noise-sensitive uses with ambient noise levels within the “normally unacceptable” or “clearly unacceptable” category (see Figure 4), or any 5-dBA or greater noise increase if the ambient noise level at the affected sensitive land use is within the “normally acceptable” or “conditionally acceptable” category, would be considered significant.

6 METHODOLOGY

This analysis focuses on the potential change in the current noise levels resulting from the project's implementation. Both construction and operation of the project would generate noise and ground-borne vibration. Estimations for short-term construction, operation, and long-term non-transportation and transportation source noise levels, along with evaluations of ground-borne vibration impacts, were made by combining existing literature with the application of recognized noise and vibration prediction and propagation methodologies. Employing the assumptions given for the project's construction and operation, the predicted noise and vibration levels were calculated using the methodologies outlined below.

6.1.1 Construction Noise

6.1.1.1 ON-SITE CONSTRUCTION NOISE

The evaluation of potential noise and vibration impacts associated with project construction was based on the construction schedule, phasing, and equipment assumptions provided by the applicant for the project.

Construction-related noise was analyzed using data and modeling methodologies from the Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (FHWA 2011). The Roadway Construction Noise Model is FHWA's national model for the prediction of construction noise. This software is based on actual sound level measurements from various equipment types taken during the Central Artery/Tunnel Project conducted in Boston, Massachusetts, during the early 1990s (FWHA 2011).

Estimates of noise from the construction of the project are based on a roster of the maximum amount of construction equipment used on a given day. Table 14 presents standard construction equipment and the associated noise level at 50 feet. The Roadway Construction Noise Model has noise levels for various types of equipment preprogrammed into the software; that is, the noise level associated with the equipment is typical for the equipment type and not based on any specific make or model.

The approximate noise generated by construction equipment to be used at the project site has been conservatively calculated based on an estimated project construction equipment roster anticipated to be used at the construction site, without consideration of further attenuation due to atmospheric interference or intervening structures.

The equipment and activities on-site would vary throughout the project, depending on various stages of construction. The predicted noise from construction activity is presented as a worst-case (highest noise level) scenario, where it is assumed that all equipment is present and operating simultaneously on-site for each stage of construction.

To analyze the project's potential noise impacts, the average 1-hour Leq construction noise level generated during each phase of construction was estimated at the analyzed receptor based on its distance to the construction phase activity.

Table 14. Noise Levels for Common Construction Equipment

Equipment Description	Typical Maximum Noise Levels at 50 Feet (dBA)
Compactor (ground)	83
Crane	81
Dozer	82
Drill rig truck	79
Excavator	81
Front-end loader	79
Generator	81
Grader	85
Pickup truck	75
Tractor	84
Trencher	80
Welder/torch	74

Source: Roadway Construction Noise Model Software, Version 1.1 (FHWA 2011)

6.1.1.2 OFF-SITE CONSTRUCTION NOISE

Noise levels would be generated from construction-related traffic associated with worker trips and haul-truck trips on roadways. The analysis of roadway noise levels from the project's construction traffic was conducted using a proprietary traffic noise model (SoundPLAN Essential v5.1), with calculations based on data and methodology from the FHWA Traffic Noise Model, Version 2.5 (FHWA 2004).

This model allows for calculating noise levels at specific distances from the roadway based on traffic volumes, average speeds, and site environmental conditions. This analysis assessed the highest daily worker and haul-truck trips during project construction. The construction-related off-site worker trip and haul-truck volumes were obtained from the applicant.

SoundPLAN Essential, using methodologies from the FHWA Traffic Noise Model, calculates the hourly Leq noise levels generated by construction-related traffic. Potential noise impacts were then determined by comparing the predicted noise levels along the project's haul routes.

6.1.2 Operational Noise

6.1.2.1 ON-SITE OPERATIONAL NOISE

On-site noise levels would be generated by stationary noise sources such as mechanical equipment (inverters, transformers, and BESS enclosures). Impacts from the operation of the mechanical equipment were analyzed using SoundPLAN Essential.

Using noise level data from published sources, impacts from these on-site stationary noise sources are evaluated by estimating the noise levels that each noise source would generate at the nearest noise-sensitive receptors. The estimated noise level from each noise source considers the distance from source to receptor. The nearest receptor to the project site boundary is located approximately 260 feet to the southwest.

Based on the sound power levels for each of the sources, SoundPLAN estimates noise contours of the overall project in accordance with a variety of standards, primarily International Standards Organization (ISO) 9613-2:1996, Acoustics, standards for noise propagation calculations. All sound propagation losses, such as geometric spreading, air absorption, ground absorption, and barrier shielding, are calculated in accordance with these recognized standards.

The model accounts for reflection, from adjacent structures and the ground. The model uses industry-accepted propagation algorithms and accepts sound power levels (in dB) provided by the manufacturer and other sources. The calculations account for classical sound wave divergence, plus attenuation factors resulting from air absorption, basic ground effects, and barrier/shielding.

6.1.2.2 OFF-SITE OPERATIONAL NOISE

After construction is completed and the project site is operational, traffic volumes in the area are expected to be relatively low. The project substation would be uncrewed during operation; however, a workforce of approximately 25 to 40 personnel would visit the substation as needed for maintenance, equipment operation, and/or security. Final staffing levels and configuration would be based on the final site configuration and early operating and maintenance experience. Operational staff would be responsible for the cleanliness of the operation and maintenance area. The traffic stemming from the proposed project's operation is not anticipated to increase the current noise levels in the vicinity of the project.

6.1.3 Ground-Borne Vibration

6.1.3.1 CONSTRUCTION GROUND-BORNE VIBRATION

Construction-related vibration resulting from the project was analyzed using data and modeling methodologies provided by the FTA analytical vibration prediction model (FTA 2018). This guidance manual provides typical vibration source levels for various types of construction equipment, as well as methods for estimating the propagation of ground-borne vibration over distance.

The following equation was used to estimate the change in PPV levels over distance:

$$PPV_{equipment} = PPV_{ref} \times (100/D_{rec})^{n}$$

Where: $PPV_{equipment}$ is the PPV at a receptor; PPV_{ref} is the reference PPV at 100 feet from the equipment; D_{rec} is the distance from the equipment to the receptor, in feet; and n is the attenuation rate through ground (the default suggested value for n is 1.1). The equation was used to estimate the PPV at each of the closest vibration-sensitive receptors based on the worst-case (closest) distance between each source and receptor.

Vibration emission levels (PPV_{ref}) used are from measurements from several projects, including the Central Artery/Tunnel Project in Boston, and from several published sources, including FTA (2018) and Dowding (1996).

6.1.3.2 OPERATIONAL GROUND-BORNE VIBRATION

The primary source of ground-borne vibration related to the proposed project's operation includes traffic. Humans are not likely to perceive vehicular-induced ground vibration. Therefore, the proposed project's operation would not increase the current vibration levels in the vicinity of the project.

7 IMPACTS

Impact NOI-1 Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies? (Less than Significant)

Construction Noise

Project construction would consist of different activities undertaken in phases through to the operation of the project. For this analysis, project construction is divided into three phases based on the types of equipment required and workload: 1) site preparation; 2) solar array structure construction; and 3) solar panel and BESS construction (see Table 1).

ON-SITE CONSTRUCTION NOISE

Construction activities associated with the project are anticipated to last approximately 18 months, with completion anticipated in 2026 based on the construction schedule and phasing provided by the applicant for the project (see Section 2.3). During this time, temporary increases in noise levels at the project site are expected to occur due to the operation of various large construction equipment within the project site.

Table 15 shows the project's anticipated construction schedule and presents an estimate of the maximum number of pieces of equipment for each construction phase, and conservatively assumes equipment will be operating 10 hours per day, 5 days per week for each construction phase duration.

Table 15. Construction Anticipated Schedule, Trips, and Equipment

Phase (Duration)	Equipment Used		
	Type	Number	Hours/Day
1. Stage 1 March 1, 2025–October 31, 2025 (175 working days)	Tractors/loaders/backhoes	4	10
	Off-highway truck	1	10
	Plate compactors	2	10
	Excavators	1	10
	Graders	1	10
	Rubber-tired bulldozers	2	10
2. Stage 2 June 1, 2025–February 28, 2026 (195 working days)	Cranes	2	10
	Forklifts	5	10
	Trenchers	1	10
	Rubber-tired loaders	1	10
	Generator sets	15	10
	Off-highway truck	1	10
	Excavators	4	10
	Bore/drill rigs	1	10
	Rubber tired dozers	1	10
	Tractors/loaders/backhoes	5	10
	Welders	12	10
3. Stage 3 December 1, 2025–August 31, 2026 (196 working days)	Off-highway truck	1	10
	Forklifts	3	10
	Excavators	1	10
	Skid steer loader	1	10
	Tractors/loaders/backhoes	1	10

The highest construction noise levels at each of the analyzed monitoring locations were estimated based on the reference noise levels shown in Table 16 and the distance of each analyzed monitor from the project's construction activities. To more accurately characterize the noise associated with each construction phase, a usage factor for each type of equipment was used to represent those periods when equipment is not operating under full-power conditions. Additionally, the noise levels were estimated to present a conservative impact analysis, assuming all pieces of equipment operate simultaneously. Furthermore, the model assumes that construction noise is constant when, in reality, construction activities are periodic and change throughout the day.

As discussed in Section 6.1.1, the corresponding significance criterion used in this construction noise analysis is a noise level (Leq) of 80 dBA at the noise-sensitive use. The estimated construction noise levels that would be experienced by the nearby sensitive receptor are shown in Table 16.

Table 16. Estimated Construction Noise Levels at Nearby Sensitive Receptors

Receptor	Measured Daytime Ambient Noise Levels, Leq (dBA)	Estimated Construction Noise Levels by Construction Phases (Ambient plus Construction), Leq (dBA)			Significance Threshold, Leq (dBA)*
		Stage 1	Stage 2	Stage 3	
ST1	53.1	74.7	79.0	70.4	80.0

* Threshold is equivalent to the FTA (2018) *Transit Noise and Vibration Impact Assessment Manual* daytime threshold of 80 dBA.

As shown in Table 16, the highest estimated construction-related noise levels that could result at nearby sensitive receptors throughout the project's construction period would be 79.0 dBA Leq at sensitive receptor ST-1. The analyzed sensitive receptors near the project site would not be exposed to construction-only noise levels exceeding 80 dBA Leq. Therefore, without employing mitigation, noise impacts associated with the construction activities for the project would be less than significant.

During the construction phase of the project, various activities and equipment will generate noise, potentially impacting workers. It is essential to assess and manage this noise exposure in accordance with OSHA regulations to ensure a safe working environment.

According to Table 14, when measured at a distance of 50 feet from the source, the noise levels from construction equipment usually fall between 74 and 85 dBA. These levels require careful monitoring and possible mitigation measures to safeguard workers from excessive noise exposure.

The Time-Weighted Average (TWA) is a method used to calculate a worker's average exposure to fluctuating noise levels over an 8-hour workday. OSHA uses the TWA to determine whether workers are exposed to noise levels that require intervention.

OSHA has set specific limits for noise exposure to protect workers' hearing. The Permissible Exposure Limit (PEL) for noise is 90 dBA for an 8-hour TWA. If the TWA exceeds this limit, employers must implement measures to reduce noise exposure. The action level is set at 85 dBA for an 8-hour TWA, at which point employers must implement a hearing conservation program. This program includes regular monitoring of noise levels, providing workers with hearing protection devices such as earplugs or earmuffs, training workers on the risks of noise exposure and the correct use of hearing protection, conducting baseline and annual audiometric tests to monitor workers' hearing over time, and maintaining accurate records of noise exposure levels, hearing protection provided, and audiometric test results.

To calculate the TWA, noise exposure levels are recorded throughout the day and averaged to account for varying intensities. For instance, if a worker is exposed to 85 dBA for 4 hours and 74 dBA for the remaining 4 hours, the TWA is calculated as 82.3 dBA. Therefore, the calculated TWA of 82.3 dBA is below OSHA's action level of 85 dBA but indicates the need for ongoing monitoring and precautionary measures to ensure safety.

Given that the calculated TWA is 82.3 dBA, which is below OSHA's action level of 85 dBA but still requires attention, several measures will be taken to ensure the safety of workers and compliance with OSHA regulations.

All construction workers will be provided with appropriate hearing protection devices, such as earplugs or earmuffs, designed to reduce noise exposure effectively. This protective equipment will be mandatory for all personnel on site, regardless of their specific tasks or proximity to noise sources.

Workers will receive training on the correct use of hearing protection devices. This training will cover the importance of hearing protection, the proper fitting and maintenance of earplugs or earmuffs, and the risks associated with noise exposure.

In addition to the mandatory use of hearing protection, other noise control measures will be implemented. Engineering controls such as ensuring that all construction equipment is well-maintained to minimize noise emissions will be enforced. Using quieter construction equipment, where feasible, will also be considered.

Administrative controls will involve rotating workers to limit their exposure to high noise levels and scheduling noisy activities during times when fewer workers are present on-site. This will help reduce the overall exposure of the workforce to potentially harmful noise levels.

OFF-SITE CONSTRUCTION NOISE

Worker vehicles and haul trucks transporting equipment and materials to and from the project site during construction would increase noise levels on the local roads in the vicinity of the project site. Construction trucks would generally access the project site from nearby I-15 and turn to Rasor Road to the project site.

The traffic analysis by Kittelson & Associates, Inc. (2023) anticipates that during the construction period, daily vehicle traffic at the project site will be mainly composed of various types of vehicles, including workers' cars, delivery trucks, and construction equipment. The most frequent trips will be those of construction workers commuting to and from the site.

The project site is located in an undeveloped area adjacent to I-15, where the predominant traffic is interstate, between California and Nevada. Unlike typical urban environments, the area doesn't exhibit standard commute periods, prompting the analysis to consider traffic during a.m., midday, and p.m. peak hours.

The construction workforce is anticipated to average 200 individuals, peaking at 300, and it is conservatively assumed that all workers will commute during the peak hours. Passenger vehicle trips from the workforce will be a daily occurrence, while heavy-duty vehicle trips will vary, with the majority expected to arrive and depart throughout the workday. It is also conservatively assumed that 80% of heavy-duty trucks would commute during the peak hours, with the rest distributed evenly.

It was assumed that 80% of the workforce would commute daily to the jobsite from communities south of the project site. The remaining 20% were assumed to commute from communities north of the project site.

The estimated roadway noise levels resulting from the addition of the project's construction-related traffic on these roadway segments are shown in Table 17.

Table 17. Off-Site Construction Traffic Noise Levels

Construction Phase	Estimated Number of Trips per Hour – Peak Hour *				Estimated Off-Site Construction Noise Levels along the Project Haul Routes, Leq
					Rasor Road
	Worker	Heavy-Duty Trucks	Water Trucks	Total	dBA
Stage 1	300	80	14	**394**	45.4
Stage 2	300	80	14	**394**	45.4
Stage 3	300	80	14	**394**	45.4
Significance threshold, Leq†					53.1

Source: Kittelson & Associates, Inc. (2023)

* Trips are based on a.m. peak hour vehicle trips.
† Significance thresholds are equivalent to the existing daytime noise levels.

As shown in Table 17, the estimated noise levels generated by construction off-site traffic would be below the existing daytime ambient noise level at the noise sensitive receptors along the haul routes. Therefore, potential noise impacts from off-site construction traffic would be less than significant.

Operational Noise

To determine the potential noise impact from these sources, detailed noise modeling was conducted. The noise levels at the identified NSAs in the vicinity of the project and at the property boundary from the operation of the project have been predicted and compared with the relevant noise criteria.

OPERATIONAL ACTIVITIES

In assessing the noise impacts of the proposed facility, it's essential to identify the primary sources of noise expected during operation. The project's key components include the solar plant site, substation, and associated infrastructure.

The main contributors to noise during the project's operation are:

- Inverters for PV Arrays: These devices convert DC power generated by the solar panels into AC power suitable for the electrical grid.
- BESS Power Conversion System (PCS): Responsible for managing the charging and discharging of the battery energy storage system.
- Step-up Transformer for BESS: Converts the voltage from the BESS to match the requirements of the system.
- BESS Containers and Chillers: Components associated with the battery energy storage system. Cooling units for the BESS.
- Main Power Transformer: Located at the substation, this transformer plays a crucial role in delivering solar-generated power to the regional electrical grid.

The project's delivery of solar-generated power to the regional electrical grid will rely on the substation's infrastructure, including transformers and related equipment. While elements such as breakers, switches, meters, and other related equipment at the substation and switchyard may produce intermittent noise, they are not expected to be significant contributors.

NOISE PROFILE

The sound power level (Lpw) for each equipment noise source is listed in Table 18. All equipment sound levels were estimated based on available data from the equipment manufacturers or obtained from other sources or calculations where manufacturer's data were not available.

Table 18. Equipment Sound Power Levels

Equipment	1/1 Octave Spectrum									dBA
	31Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
Main power transformer	96.3	93.3	96.3	87.3	85.3	80.3	72.3	72.3	65.2	87.0
Inverter for PV	91.0	92.0	93.0	92.0	97.0	88.0	87.0	83.0	80.0	96.0
BESS Power Conversion System	44.2	91.0	95.0	101.6	94.8	90.1	86.4	78.9	66.5	97.2
Step-up transformer for BESS	83.4	77.4	88.4	77.4	71.4	66.4	60.4	62.4	57.4	76.0
BESS containers	104.2	96.0	97.9	91.4	76.0	72.8	65.6	59.8	56.9	86.0

INTERMITTENT NOISE SOURCES

An intermittent noise source represents any stationary noise source that is periodically or intermittently active during the day or night. Noise-emitting sources with intermittent daily operation of 4 hours or less, or emergency operation only units, were not considered in the model.

Additionally, the proposed switchyard to manage electricity transmission to and from the substation includes various components such as switches, breakers, and other equipment. These components may produce intermittent or impulsive noise during their operation. However, this type of noise is not continuous. It occurs sporadically, which sets it apart from continuous noise sources such as those appearing in Table 18, which are the focus of this operational noise assessment.

The intermittent noise from the switchyard components will be short-lived and rare, reducing the potential for prolonged exposure or disturbance. This is in stark contrast to continuous noise sources, which maintain a steady sound level and are more likely to have a significant environmental impact.

Considering the intermittent nature of the noise from the switchyard, the noise impacts during the operational phase are expected to be minimal and insignificant. Therefore, the operational noise from the switchyard is not anticipated to contribute to adverse environmental noise impacts.

SOUND LEVELS AT THE NEAREST RECEPTOR

Table 19 presents the estimated noise levels at the evaluated off-site receptors from the operation of the proposed mechanical noise sources. Appendix D provides SoundPLAN input information.

Table 19. Estimated Noise Levels at the Nearest Receptor

Off-Site Receptor	Existing Daytime Ambient Noise Levels, Leq (dBA)	Estimated Noise Levels from Equipment Operation, Leq (dBA)	Ambient plus Project Noise Levels, Leq (dBA)	Significance Threshold (dBA)*
ST-1	53.1	24.2	53.1	55.0

* Significance thresholds are assumed to be equal to 55 dBA.

As shown in Table 19, the estimated noise levels from the operation of the proposed stationary noise sources are projected to be 24.2 dBA Leq at receptor ST-1. Consequently, these estimated noise levels would fall below the existing daytime ambient noise levels (53.1 dBA) and the thresholds outlined in Section 83.01.080(c) of the San Bernardino County Development Code (55 dBA for daytime hours and 45 dBA for nighttime hours). Thus, the project's operation would not result in substantial increases in noise levels at nearby off-site sensitive uses, rendering this impact less than significant.

Noise contour grid maps were generated by SoundPLAN software and are presented in Appendix E. The maps depict the extent of noise propagation from the SoundPLAN models that were developed for the noise impact assessment. The noise contour map illustrates the extent of noise associated with the proposed project and also showcase the maximum noise impacts at the project's property boundary. It is important to note that the extent of the impacts depicted in these figures does not include the contribution of the existing background noise.

TRANSMISSION LINE NOISE

Transmission line noise is an important consideration in the design and implementation of electrical infrastructure. For the generation-tie (gen-tie) line described in this project, several factors contribute to potential noise generation. The gen-tie line will connect the collector lines from the substation to the project switchyard by boring under Interstate 15 (I-15) and will be positioned within an existing Caltrans culvert. The underground installation of the gen-tie line inherently mitigates much of the noise typically associated with overhead transmission lines. Underground lines generally produce less audible noise compared to their overhead counterparts, as the soil provides natural sound insulation.

However, even with underground placement, certain types of noise can still be relevant. One potential source of noise is corona discharge, a phenomenon that occurs when the electrical field near the conductor is strong enough to ionize the surrounding air, leading to audible noise and energy loss. Corona discharge is typically less prevalent in underground lines because the conductors are not exposed to the open air, thus minimizing the occurrence of ionization.

Thermal expansion and contraction of the transmission line as it operates might produce some noise due to the physical movement of materials. However, this noise is generally minor and further dampened by the underground setting.

In summary, the underground placement of the gen-tie line contributes significantly to minimizing transmission line noise. These measures ensure that any potential noise impact on the surrounding environment and community is kept to a minimum.

Impact NOI-2 Would the project result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels? (Less than Significant)

Construction

The operation of heavy construction equipment at the project site would generate ground-borne vibration that could affect structures immediately adjacent to the project site or could also cause an annoyance to people at those locations.

ON-SITE CONSTRUCTION GROUND-BORNE VIBRATION

Ground-borne vibration levels resulting from construction activities occurring within the project site were estimated using data published by the FTA (2018). Construction activities that would have the potential to generate levels of ground-borne vibration within the project site include mobile equipment activities, among others. Project vibration impacts were estimated using the vibration source level of construction equipment and the construction vibration assessment methodology published by the FTA.

Based on the reference vibration levels for the different pieces of equipment and the distances from the primary project construction activities, construction vibration velocity levels were estimated at the different receptors. The estimated vibration velocities were then compared with the building damage criteria in the *Transit Noise and Vibration Impacts Assessment Manual* (FTA 2018). Table 20 shows the estimated PPVs at the off-site receptors and the estimated vibration impacts to buildings.

Table 20. Construction Vibration Impacts – Building Damage

Off-Site Receptor	Estimated Vibration Velocity Levels at the Off-Site Receptors (PPV) (inches/second)			Significance Threshold (inches/second)
	Stage 1	Stage 2	Stage 3	
ST-1	0.0072	0.0027	0.0026	0.2

* FTA construction vibration impact criteria for building damage (FTA 2018).

Table 21 shows the comparison between the estimated ground-vibration levels and the human annoyance threshold.

Table 21. Construction Vibration Impacts – Human Annoyance

Off-Site Receptor	Estimated Vibration Velocity Levels at the Off-Site Receptors (VdB)			Significance Threshold (VdB)
	Stage 1	Stage 2	Stage 3	
ST-1	65	56	56	80

* FTA ground-borne vibration impact criteria for residences and buildings where people normally sleep for infrequent vibration events (FTA 2018).

As shown in Table 20 and Table 21, vibration levels generated by the construction equipment at the project site during project construction would not exceed the applicable vibration criteria for building damage or human annoyance at the surrounding structures. Therefore, impacts related to on-site construction ground-borne noise and vibration would be less than significant.

Operation

Operation of the project would not involve any sources capable of generating perceptible levels of vibration in the surrounding area. There would be no permanent source or potential to change vibration levels, except during unscheduled maintenance or repair activities, which would be similar to construction activities. Therefore, impacts related to operational ground-borne noise and vibration would be less than significant.

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APPENDIX A

Data Evaluation Sheet

Soda Mountain Solar Project
Baseline Noise Survey
Data Evaluation Sheet

SoundAdvisor™ Model 831C 11492

Location: LT-1

Coordinates:
Lat: 35°08'25.69"
Lon: 116°10'47.68"
Elevation (ft): 1344

File: sm.002lt

Measurement Information:
Time Start: 1/17/23 2:06
Time Stop: 1/18/23 2:35
Total Time Recorded: 24 hours 29 minutes 3.2 seconds

Calibrations:
Pre-Test: 1/17/2023 14:05
Post-Test: 1/18/2023 14:37

Unedited Data Summary
Overal Leq: 48.8
Ld: 49
Ln: 48.2
Ldn: 54.8

Edited Data Summary:
Overal Leq: 48.6
Ld: 48.8
Ln: 48.2
Ldn: 54.7

Location Description
Near dirt road at project site.

Description of Background Noise Sources
Traffic, birds, wind.

Event Log:

Event Number	Day	Time	Comment (Dominant Background Noise Source)
1	17-Jan	2:06	Start monitoring
2			Noise from traffic

Log of Data Removed:

Event Number	Day	Time	Length Removed	Explanation for Removing Data

Soda Mountain Solar Project
Baseline Noise Survey
Data Evaluation Sheet

Location: ST-1

Coordinates:	Lat:	35.1323158	**File:**		sm.003st22
	Lon:	-116.2083638			
	Elevation (ft):	1471			
Measurement Information:	Time Start:	1/18/23 15:04	**Calibrations:**	Pre-Test:	-0.10
	Time Stop:	1/18/21 15:19		Post-Test:	0.16
	Total Time Recorded:	0:15:18			
Unedited Data Summary	Overal Leq:	53.1 dBA	**Edited Data Summary:**	Overal Leq:	53.1 dBA
	Ld:	53.1 dBA		Ld:	53.1 dBA
	Ln:	-		Ln:	-
	Ldn:	-		Ldn:	-

Location Description
near gas station, highway, relatively close to structure

Description of Background Noise Sources
highway noise/trucks idleing in nearby parking lot

Event Log:

Event Number	Day	Time	Comment (Dominant Background Noise Source)

Log of Data Removed:

Event Number	Day	Time	Length Removed	Explanation for Removing Data

APPENDIX B

Weather Data

Baseline Noise Survey
Weather Data

Station: Lake Wainani — Elev 1804 ft, 34.88 °N, 116.61 °W
ID: KCANEWBE16

Start date: 1/17/2023 **End date:** 1/18/2023

Day	Time	Temperature		Hourly Wind	Precipitation	Humidity	Daily max	Daily min
		F	C	mph	in	%	F	F
01/172023	0:00	43.79					53.19	40.89
	1:00	43.75						
	2:00	43.48						
	3:00	42.71						
	4:00	41.87						
	5:00	41.56						
	6:00	40.89						
	7:00	41.42						
	8:00	44.21						
	9:00	46.40						
	10:00	47.59						
	11:00	49.06						
	12:00	50.73						
	13:00	52.23						
	14:00	53.09	11.72	13.5	0.00	42%		
	15:00	53.19	11.77	14.3	0.00	43%		
	16:00	51.73	10.96	13.6	0.00	47%		
	17:00	48.80	9.33	13.2	0.00	52%		
	18:00	47.24	8.47	12.3	0.00	56%		
	19:00	45.75	7.64	11.0	0.00	58%		
	20:00	44.74	7.08	9.7	0.00	59%		
	21:00	43.72	6.51	9.7	0.00	61%		
	22:00	42.90	6.06	10.2	0.00	64%		
	23:00	41.83	5.46	10.1	0.00	66%		

Baseline Noise Survey
Weather Data

Station: Lake Wainani — Elev 1804 ft, 34.88 °N, 116.61 °W
ID: KCANEWBE16

Start date: 1/17/2023 **End date:** 1/18/2023

Day	Time	Temperature		Hourly Wind	Precipitation	Humidity	Daily max	Daily min
		F	C	mph	in	%	F	F
1/18/2023	0:00	40.96	4.98	10.4	0.00	68%	53.04	35.58
	1:00	40.68	4.82	9.6	0.00	68%		
	2:00	39.83	4.35	8.3	0.00	69%		
	3:00	38.88	3.82	7.9	0.00	71%		
	4:00	37.83	3.24	6.4	0.00	74%		
	5:00	35.58	1.99	4.3	0.00	80%		
	6:00	35.92	2.18	4.1	0.00	79%		
	7:00	36.83	2.68	5.1	0.00	77%		
	8:00	40.11	4.50	7.0	0.00	71%		
	9:00	43.39	6.33	5.3	0.00	64%		
	10:00	46.70	8.17	5.8	0.00	55%		
	11:00	49.42	9.68	4.8	0.00	39%		
	12:00	50.61	10.34	5.3	0.00	35%		
	13:00	51.47	10.81	4.1	0.00	37%		
	14:00	53.04	11.69	2.6	0.00	33%		
	15:00							
	16:00							
	17:00							
	18:00							
	19:00							
	20:00							
	21:00							
	22:00							
	23:00							

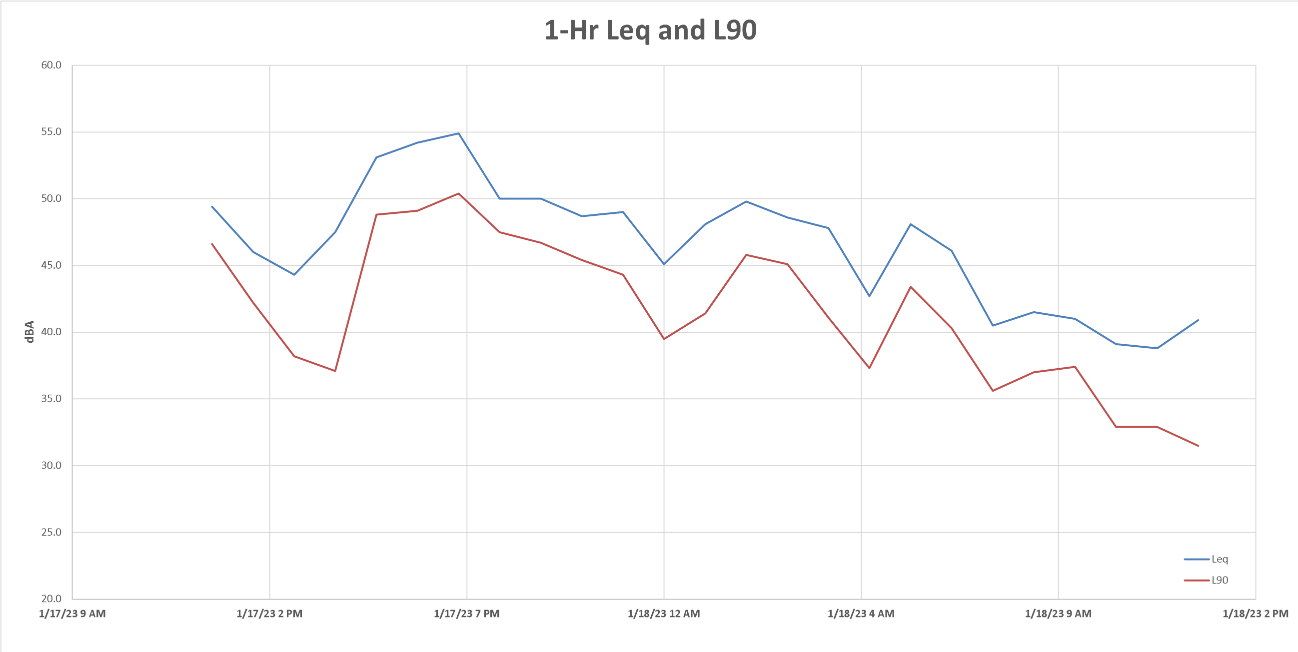
APPENDIX C

Histograms

Noise Measurement Datasheet

PROJECT Soda Mountain Solar Project

Site ID LT1



Field Technician Jo Guest

APPENDIX D

SoundPLAN Inputs

Source name	Reference	Level	dB	Frequency spectrum [dB]								
				31	63	125	250	500	1	2	4	8
				Hz	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz
Inverter1	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter2	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter3	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter4	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter5	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter6	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter7	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter8	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter9	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter10	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter11	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter12	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter13	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter14	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter15	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter16	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter17	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter18	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter19	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter20	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter21	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter22	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter23	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter24	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter25	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter26	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter27	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter28	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter29	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter30	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter31	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter32	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter33	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter34	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter35	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter36	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter37	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter38	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter39	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter40	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter41	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter42	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter43	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter44	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter45	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter46	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter47	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter48	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter49	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter50	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter51	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter52	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter53	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter54	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter55	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter56	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter57	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter58	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter59	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter60	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter61	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80

Source name	Reference	Level	dB	Frequency spectrum [dB]								
				31	63	125	250	500	1	2	4	8
				Hz	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz
Inverter62	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter63	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter64	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter65	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter66	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter67	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter68	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter69	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter70	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter71	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter72	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Inverter73	Lw/unit	Day/Night	101.1	91	92	93	92	97	88	87	83	80
Transfromer 1	Lw/unit	Day/Night	100.7	96.3	93.3	96.3	87.3	85.3	80.3	72.3	72.3	65.2
Transfromer 2	Lw/unit	Day/Night	100.7	96.3	93.3	96.3	87.3	85.3	80.3	72.3	72.3	65.2
PCS1	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS2	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS3	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS4	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS5	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS6	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS7	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS8	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS9	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS10	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS11	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS12	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS13	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS14	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS15	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS16	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS17	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS18	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS19	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS20	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS21	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS22	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS23	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS24	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS25	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS26	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS27	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS28	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS29	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS30	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS31	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS32	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS33	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS34	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS35	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS36	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS37	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS38	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS39	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS40	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS41	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS42	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS43	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS44	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS45	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS46	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS47	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5

Source name	Reference	Level	dB	Frequency spectrum [dB]								
				31	63	125	250	500	1	2	4	8
				Hz	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz
PCS48	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS49	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS50	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS51	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS52	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS53	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS54	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS55	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS56	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS57	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS58	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS59	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS60	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS61	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS62	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS63	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS64	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS65	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS66	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS67	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS68	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS69	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS70	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS71	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS72	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS73	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS74	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS75	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS76	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS77	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS78	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS79	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS80	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS81	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS82	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
PCS83	Lw/unit	Day/Night	103.7	44.2	91	95	101.6	94.8	90.1	86.4	78.9	66.5
Enclosure1	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure2	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure3	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure4	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure5	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure6	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure7	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure8	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure9	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure10	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure11	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure12	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure13	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure14	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure15	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure16	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure17	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure18	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure19	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure20	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure21	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure22	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure23	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure24	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure25	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9

Source name	Reference	Level	dB	Frequency spectrum [dB]								
				31	63	125	250	500	1	2	4	8
				Hz	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz
Enclosure26	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure27	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure28	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure29	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure30	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure31	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure32	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure33	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure34	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure35	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure36	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure37	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure38	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure39	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure40	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure41	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure42	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure43	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure44	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure45	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure46	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure47	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure48	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure49	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure50	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure51	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure52	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure53	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure54	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure55	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure56	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure57	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure58	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure59	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure60	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure61	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure62	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure63	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure64	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure65	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure66	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure67	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure68	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure69	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure70	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure71	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure72	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure73	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure74	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure75	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure76	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure77	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure78	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure79	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure80	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure81	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure82	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure83	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure84	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure85	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure86	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9

Source name	Reference	Level	dB	Frequency spectrum [dB]								
				31	63	125	250	500	1	2	4	8
				Hz	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz
Enclosure87	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure88	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure89	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure90	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure91	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure92	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure93	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure94	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure95	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure96	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure97	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure98	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure99	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure100	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure101	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure102	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure103	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure104	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure105	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure106	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure107	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure108	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure109	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure110	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure111	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure112	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure113	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure114	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure115	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure116	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure117	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure118	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure119	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure120	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure121	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure122	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure123	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure124	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure125	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure126	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure127	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure128	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure129	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure130	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure131	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure132	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure133	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure134	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure135	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure136	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure137	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure138	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure139	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure140	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure141	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure142	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure143	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure144	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure145	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure146	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure147	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9

Source name	Reference	Level	dB	Frequency spectrum [dB]								
				31	63	125	250	500	1	2	4	8
				Hz	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz
Enclosure148	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure149	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure150	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure151	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure152	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure153	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure154	Lw/unit	Day/Night	105.8	104.2	96	97.9	91.4	76	72.8	65.6	59.8	56.9
Enclosure155	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure156	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure157	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure158	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure159	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure160	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure161	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure162	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure163	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure164	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure165	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure166	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure167	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure168	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure169	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure170	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure171	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure172	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure173	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure174	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure175	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure176	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure177	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure178	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure179	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure180	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure181	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure182	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure183	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure184	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure185	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure186	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure187	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure188	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure189	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure190	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure191	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure192	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure193	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure194	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure195	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure196	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure197	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure198	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure199	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure200	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure201	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure202	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure203	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure204	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure205	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure206	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure207	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure208	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9

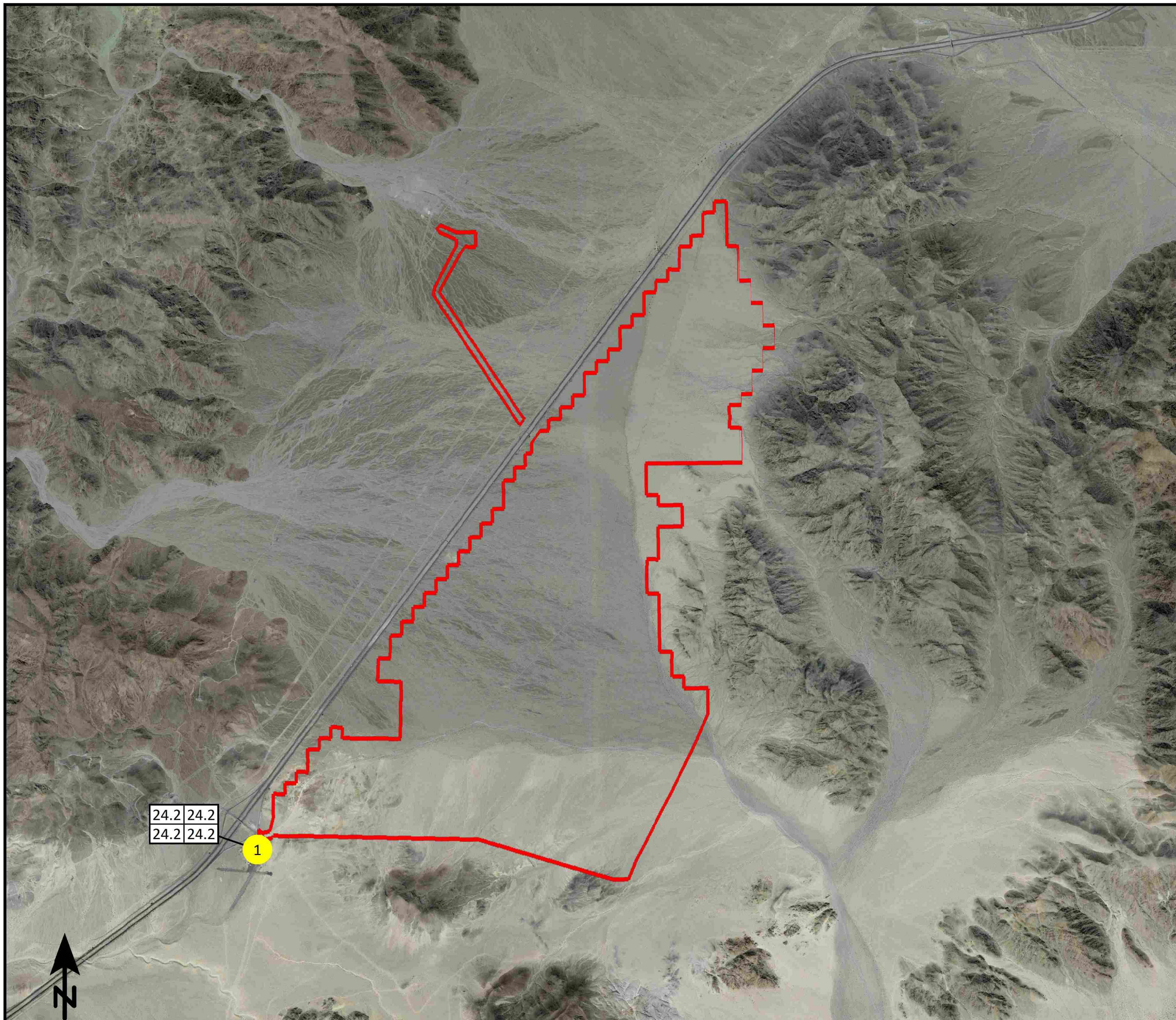
Source name	Reference	Level	dB	Frequency spectrum [dB]								
				31	63	125	250	500	1	2	4	8
				Hz	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz
Enclosure209	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure210	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure211	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure212	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure213	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure214	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure215	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure216	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure217	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure218	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure219	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure220	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure221	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure222	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure223	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure224	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure225	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure226	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure227	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure228	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure229	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure230	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure231	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure232	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure233	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure234	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure235	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure236	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure237	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure238	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure239	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure240	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure241	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure242	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure243	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure244	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure245	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure246	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure247	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure248	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure249	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure250	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure251	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure252	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure253	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure254	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure255	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure256	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure257	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure258	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure259	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure260	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure261	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure262	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure263	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure264	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure265	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure266	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure267	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure268	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure269	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9

Source name	Reference	Level	dB	Frequency spectrum [dB]								
				31 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Enclosure270	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure271	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure272	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure273	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure274	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure275	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure276	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure277	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure278	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure279	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure280	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure281	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure282	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure283	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure284	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure285	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure286	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure287	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure288	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure289	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure290	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure291	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure292	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure293	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure294	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure295	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure296	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure297	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure298	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure299	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure300	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure301	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure302	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure303	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure304	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure305	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure306	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure307	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure308	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure309	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure310	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure311	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure312	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9
Enclosure313	Lw/unit	Day/Night	108.8	107.2	99	100.9	94.4	79	75.8	68.6	62.8	59.9

Note: Each "Enclosure" represents 2 BESS containers.

APPENDIX E

Project Operation Isopleths



Soda Mountain Solar Project

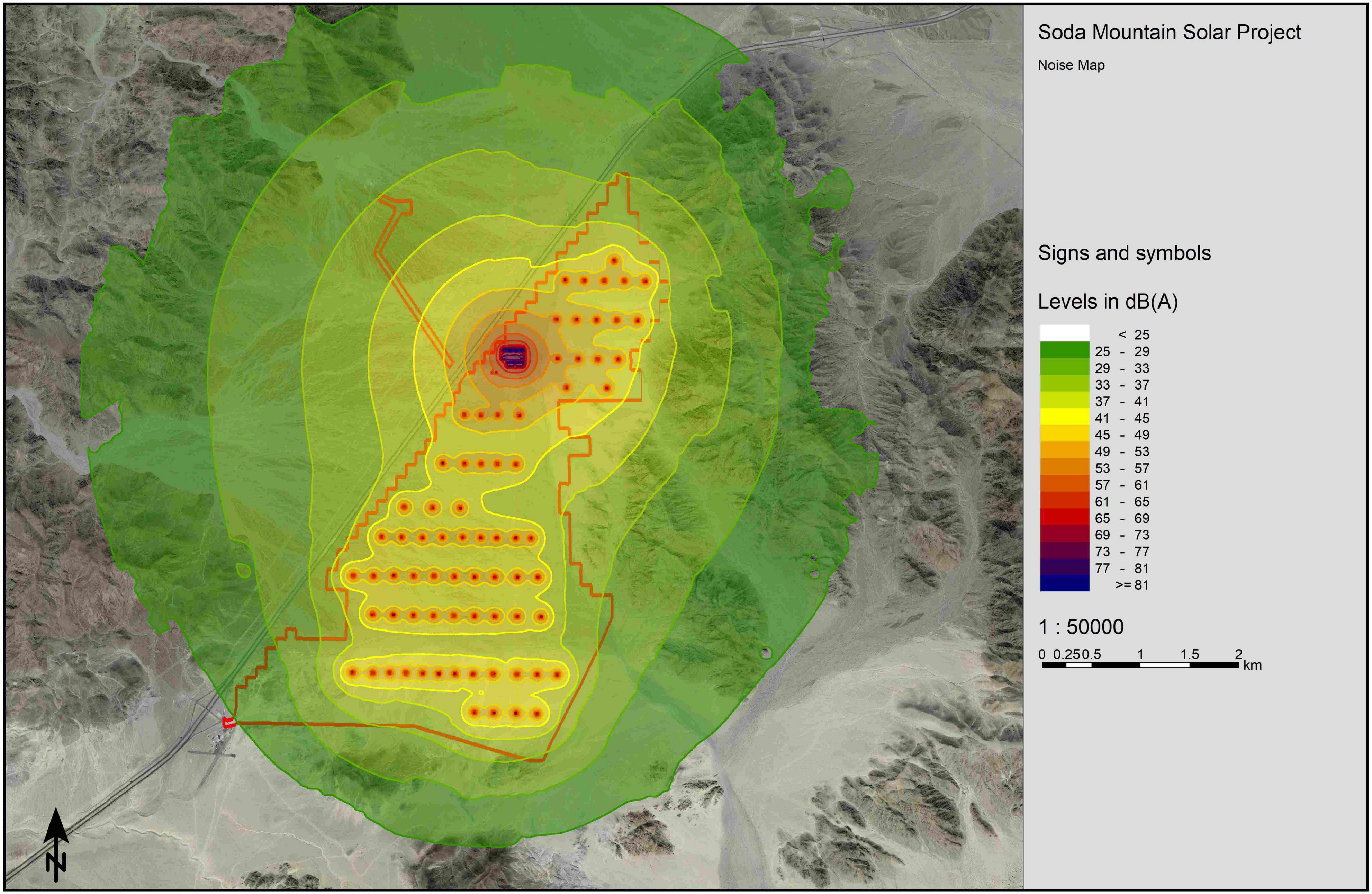
Single Point Map

Signs and symbols

Receiver

1 : 50000

0 0.25 0.5 1 1.5 2 km


Soda Mountain Solar Project
Noise Map
Signs and symbols
Levels in dB(A)
< 25
25 - 29
29 - 33
33 - 37
37 - 41
41 - 45
45 - 49
49 - 53
53 - 57
57 - 61
61 - 65
65 - 69
69 - 73
73 - 77
77 - 81
>= 81
1 : 50000
0 0.25 0.5 1 1.5 2 km
N