DOCKETED	
Docket Number:	23-OPT-02
Project Title:	Darden Clean Energy Project
TN #:	252966
Document Title:	Appendix J Noise Study_Darden Clean Energy
Description:	Includes a Noise Study which analyzes the potential noise impacts of the proposed Darden Clean Energy Project and evaluates the short and long term impacts of the Project to noise-sensitive receptors. Appendix J-1 On-Site Noise Measurement Data Appendix J-2 Roadway Construction Noise Model (RCNM) Results Appendix J-3 Traffic Noise Model (FHWA RD 77-108) Results Appendix J-4 SoundPLAN Calculations Appendix J-5 Vibration Calculations
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Submission Date:	11/6/2023 12:52:49 PM
Docketed Date:	11/6/2023

Appendix J

Noise Study

Darden Clean Energy Project

Noise Study

prepared for

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October 2023

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1 Project Description

1.1 Introduction

This study analyzes the potential noise impacts of the proposed Darden Clean Energy Project (Project) located in unincorporated Fresno County. Rincon Consultants, Inc. (Rincon) prepared this study under contract to IP Darden I, LLC and Affiliates (Applicant), wholly owned subsidiaries of Intersect Power, LLC for use in support of California Environmental Quality Act (CEQA) compliance for the Project and the study adheres to the California Energy Commission (CEC) requirements for Opt-In Applications (Title 20, California Code of Regulations, Section 1704, Appendix B). The study evaluates the short- and long-term impacts of the Project to noise-sensitive receptors. Table 1 provides a summary of potential Project impacts.

Table 1 Summary of Impacts

Issue	Proposed Project's Level of Significance
Would the Project result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less Than Significant
Would the Project result in generation of a substantial permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less Than Significant (noise generated from the Solar Facility, Gen-Tie, BESS, Step-Up Substation, and Utility Switchyard) Less Than Significant with Mitigation (noise generated from the Green Hydrogen Facility)
Would the Project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	Less Than Significant
For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	No Impact

1.2 Project Location

The Project site is an irregular shape, located in an agricultural area of unincorporated Fresno County south of the community of Cantua Creek (Figure 1). The proposed solar facility, and Options 1 and 2 BESS, step-up substation, and green hydrogen facility component sites would be located on approximately 9,100 acres of land currently owned by Westlands Water District, between South Sonoma Avenue to the west and South Butte Avenue to the east. The proposed approximately 10 to 15-mile gen-tie line would span west from the intersection of South Sonoma Avenue and West Harlan Avenue to immediately west of Interstate 5, where it would connect to the proposed utility switchyard along Pacific Gas and Electric Company (PG&E)'s Los Banos-Midway #2 500 kV

transmission line (Figure 1). The alternate green hydrogen facility site being considered is located adjacent to the proposed utility switchyard site.

Land cover types are predominantly retired agricultural lands that have been irregularly farmed over the last 10 years and seasonally or annually disked when not growing crops, and associated dirt roads, field and road shoulders, basins, ditches, and berms. Some active farming occurred in limited areas on the Project site during 2023. Surrounding properties include retired and active agricultural lands. The gen-tie line spans privately-owned land on the western portion of the Project site with land-cover types including active agriculture. The California Aqueduct bisects the gen-tie parcels, running generally north-south. Compacted dirt and paved roads border and separate each land-cover type. Figure 1 and Figure 2 show the regional location and immediate vicinity of the Project area, respectively.

1.3 Project Description

The Project consists of the construction, operation, and eventual repowering or decommissioning of a 1,150 megawatt (MW) solar photovoltaic (PV) facility, an up to 4,600 megawatt-hour (MWh) battery energy storage system (BESS), an up to 1,150 MW green hydrogen facility, a 34.5-500 kilovolt (kV) grid step-up substation, a 10 to 15-mile 500 kV generation intertie (gen-tie) line, a 500 kV utility switchyard along the PG&E Los Banos-Midway #2 500 kV transmission line, and appurtenances.

Project construction is anticipated to take between 18 and 36 months to complete and the Project would be operational by 2027 or 2028. The Project would include the following major components:

- **Solar Facility, Step-Up Substation, and Gen-tie**
  - Construct a 1,150 MW solar PV facility, consisting of approximately 3,100,000 solar panels, inverter-transformer stations, and an electrical collection system. The collection cables would be buried underground in a trench about 4 feet deep, with segments installed overhead on wood poles to connect all of the solar facility development areas to the on-site step-up substation.
  - Construct a new step-up substation to step-up the medium voltage of the PV collector system from 34.5 kV to 500 kV, located on approximately 20 acres. Two locations (Options 1 and 2 sites) are being considered for the step-up substation.
  - Construct operations and maintenance facilities.
  - Construct an approximately 10 to 15-mile long 500 kV gen-tie line, consisting of either monopole tubular steel poles or steel H-frame structures and dead-end structures, to interconnect the step-up substation to the new utility switchyard. The gen-tie line would be located within an up to 275-foot wide corridor.

- **BESS**
  - Construct a battery storage system capable of storing up to 1,150 MW of electricity for four hours (up to 4,600 MWh), located on approximately 35 acres. Two locations (Options 1 and 2 sites) are being considered for the BESS.

Figure 1 Regional Location

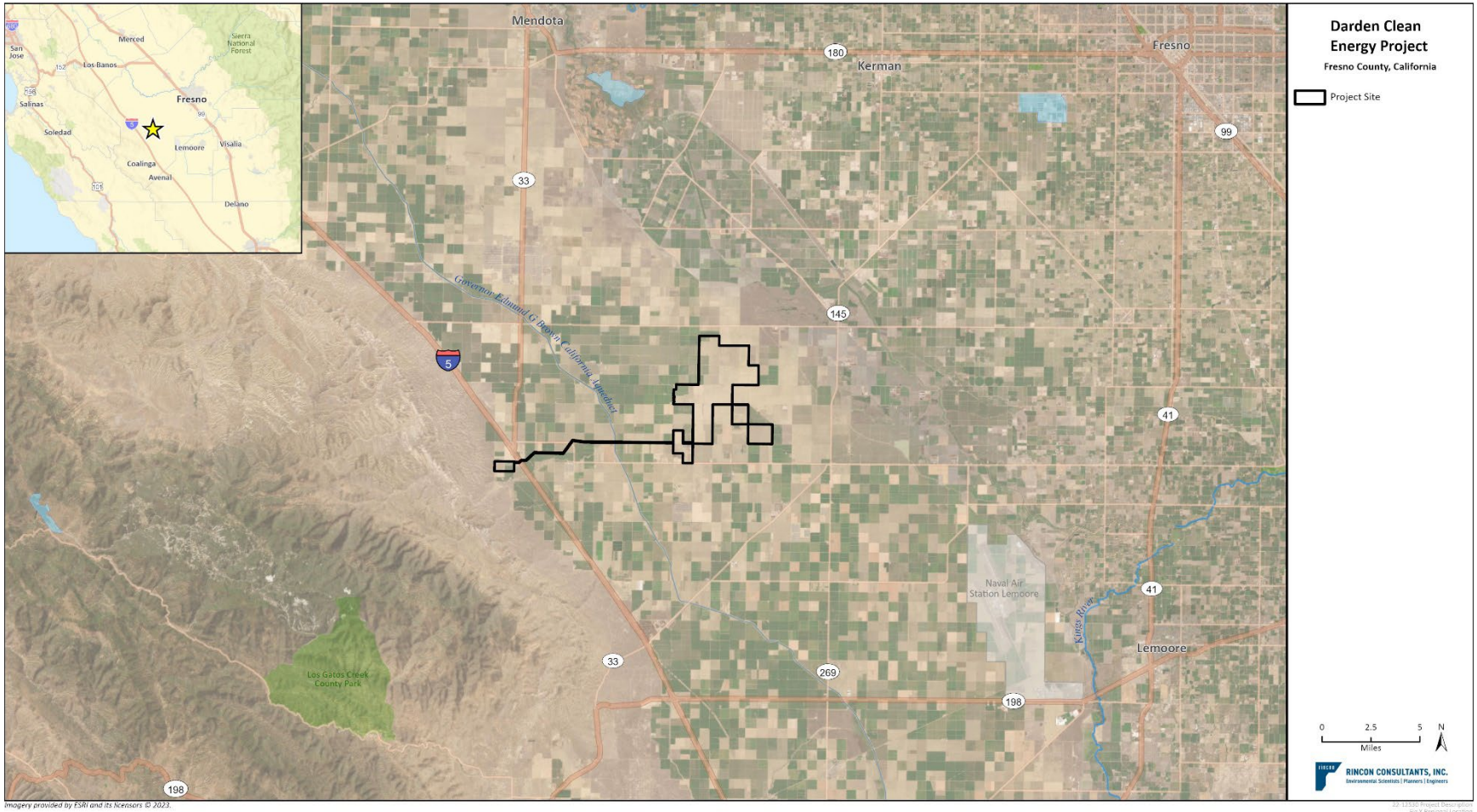
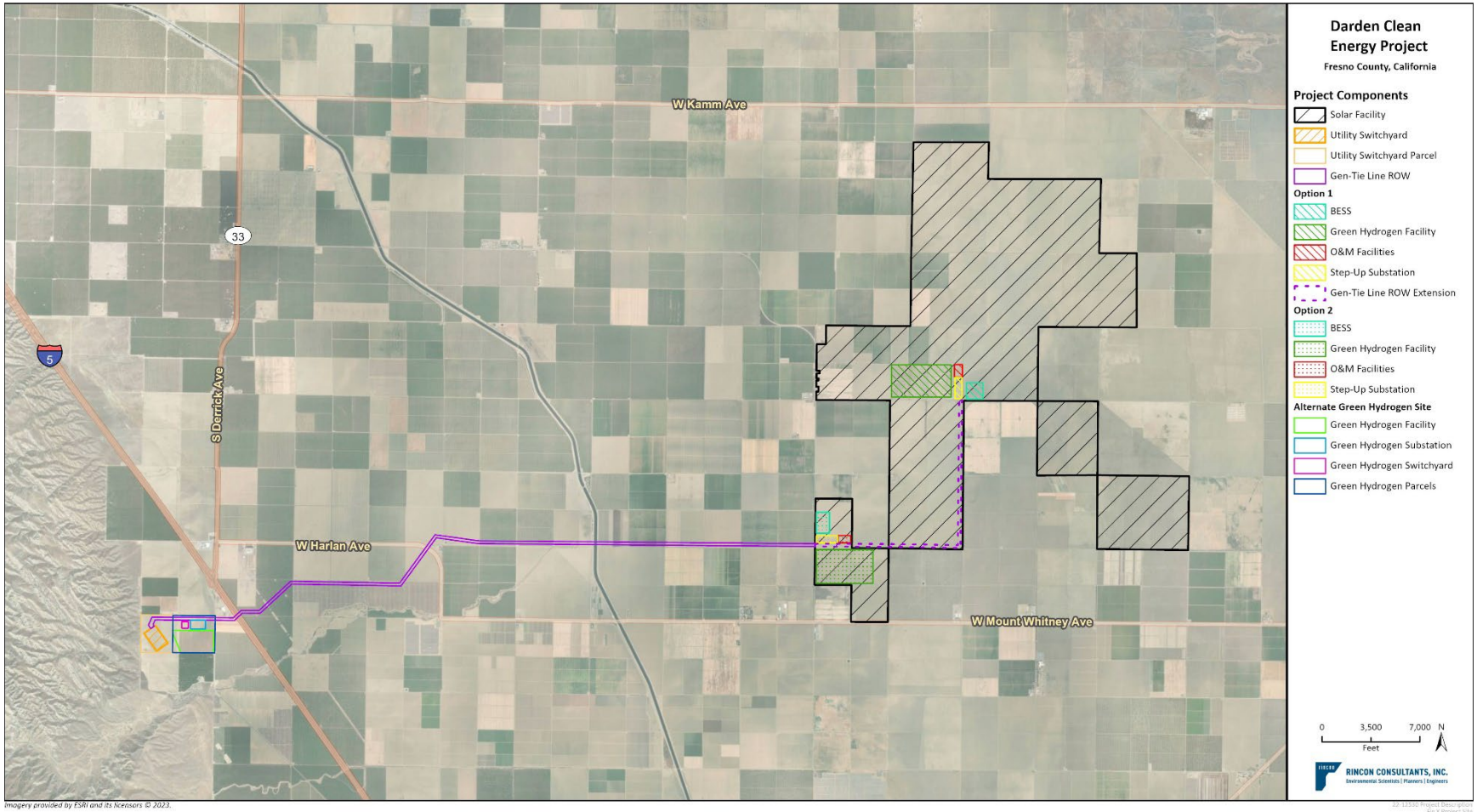


Figure 2 Project Site



- **Green Hydrogen Facility**
  - Construct an up to 1,150 MW green hydrogen facility, consisting of an electrolyzer and water treatment plant with reverse osmosis and ancillary equipment such as filters, storage tanks, backwash systems and chemical dosing systems.
  - Three locations are being considered for the green hydrogen facility. Option 1 or Option 2 sites would be approximately 225 acres in size and would be located within the solar facility. In addition, an approximately 100-acre alternate site located west of Interstate 5 is being considered. If the alternate site is selected, it would include the construction of a substation and switchyard on approximately 20 additional acres.
- **Utility Switchyard**
  - Construct a PG&E-owned switchyard, consisting of high-voltage circuit breakers, switches, and series capacitor line compensation equipment in a breaker-and-half configuration, to electrically connect the Project's generation onto PG&E's 500 kV transmission network. The utility switchyard would be located on approximately 40 acres.

The Project would operate for approximately 35 years, at which time Project facilities would be either repowered or decommissioned. Following decommissioning, the Project site would be restored and reclaimed to the extent practicable to pre-construction conditions consistent with site lease agreements.

Solar Facility

Photovoltaic Panels and Support Structures

The solar facility would utilize either mono-facial or bi-facial panels, which would be mounted in a portrait orientation as single panels or mounted in a landscape orientation and stacked two high on a north-south oriented single-axis tracking system that would track the sun from east to west during the day. Panels would be arranged in strings with a maximum height of 10 feet at full tilt or slightly higher due to topography or hydrology. The single axis tracking system would be oriented along a north/south axis with panels facing east in the early morning, lying flat during high noon, and facing west during later afternoon and evening hours. Spacing between each row would be a minimum of 18 feet. The solar panel array would generate electricity directly from sunlight, which would be collected, converted to alternating current (AC), stored, and delivered to the on-site step-up substation. Structures supporting the PV panels would consist of steel piles (e.g., cylindrical pipes, H-beams, helical screws, or similar structures). The piles typically would be spaced 10 feet apart. For the tracking system, piles would be installed to a height of approximately 4 to 6 feet above grade (minimum 1 foot but could be higher to compensate for terrain variations and clearance due to water/flooding).

Inverters, Transformers, and Electrical Collection System

The solar facility would be designed and laid out primarily in sub-arrays installed in rows, ranging in capacity from 4 to 7 MW. Each sub-array would include a direct current (DC) to AC inverter and medium voltage transformer equipment area (i.e., inverter-transformer station) measuring 40 feet by 25 feet. As necessary, sub-arrays would be designed and sized as appropriate to accommodate the irregular shape of the Project site. The precise sub-array dimensions and configuration would be dependent on available technology and market conditions. Each sub-array would include an inverter-

transformer station constructed on a concrete pad or steel skid centrally located within the surrounding PV sub-arrays of that block. Each inverter transformer station would contain an inverter, a transformer, a battery enclosure, and a switchboard. If required based on site meteorological conditions, an inverter shade structure would be installed at each pad. The shade structure would consist of wood or metal supports and a durable outdoor material shade structure (metal, vinyl, or similar). The shade structure, if utilized, would extend up to 10 feet above the ground surface.

Panels would be electrically connected into panel strings using wiring secured to the panel racking system. Underground cables would be installed to convey the DC electricity from the panels via combiner boxes or combiner harnesses with a trunk bus system located throughout the PV sub-arrays, to inverters that would convert the DC to AC electricity. The output voltage of the inverters would be stepped up to the required collection system voltage at the medium voltage pad mount transformer located in close proximity to the inverter. The 34.5 kV level collection cables would be buried underground in a trench about 4 feet deep, with segments installed overhead on wood poles to connect all of the solar facility development areas to the on-site step-up substation, which may or may not involve an overhead or underground road crossing. Thermal specifications require 10 feet of spacing between the medium voltage lines, and in some locations closer to the on-site step-up substation interconnection, more than 20 medium voltage AC lines run in parallel. In locations where the collection system crosses a road or pipelines overhead, direct embedded wood poles would be used on a case-by-case basis. Wood poles spaced up to 250 feet apart could be installed on the site. The typical height of the poles would be approximately 60 to 100 feet, with an embedment depth of 10 to 15 feet depending on the type of crossing, and diameters varying from 12 to 20 inches.

Step-Up Substation

The step-up substation would step-up the medium voltage of the PV collector system from 34.5 kV to 500 kV. The step-up substation would be located on approximately 20 acres within the solar facility, as shown in Figure 2.

The step-up substation would terminate the medium voltage solar feeders to several common medium voltage busses and transform the power at these busses to the high voltage required for transmission on the gen-tie line to the utility switchyard.

The internal arrangements for the step-up substation would include:

- Power and auxiliary transformers with foundations
- Prefabricated control building(s) to enclose the protection and control equipment, including relays and low voltage switchgear (each building measuring is approximately 20 feet by 40 feet, and 10 to 20 feet high)
- Metering stand
- Capacitor bank(s)
- Circuit breakers and disconnect switches
- Up to two microwave towers, approximately 18 feet by 18 feet and up to 200 feet tall, mounted with an antenna up to 15 feet in diameter
- Dead-end structure(s) up to 100 feet in height to connect the step-up substation to the grid

Gen-Tie

The Project would include a 500 kV gen-tie line to interconnect the step-up substation to the proposed utility switchyard and is anticipated to be approximately 10 miles long but may be up to 15 miles long, depending on the location of the step-up substation (Option 1 or Option 2). The 500 kV gen-tie line would be located within an up to 275-foot corridor, extending west from the solar facility across privately administered lands, across Interstate 5, and into the proposed utility switchyard. The gen-tie line would be constructed with tubular steel poles (TSPs). Gen-tie structures would be at least 120 feet tall, with a maximum height of 200 feet. There would be a total of approximately 80 poles and dead-end structures. The total number of gen-tie poles would be determined during final design engineering.

BESS

The BESS would be capable of storing up to 1,150 MW of electricity for 4 hours (up to 4,600 MWh), requiring up to 35 acres that would be located near the step-up substation to facilitate interconnection and metering. The storage system would consist of battery banks housed in electrical enclosures and buried electrical conduit. Up to 1,220 electrical enclosures measuring approximately 40 feet or 52 feet by 8 feet and 8.5 feet high would be installed on concrete foundations designed for secondary containment. The Project could use any commercially available battery technology, including but not limited to lithium ion, LFP (lithium iron phosphate), NMC (nickel manganese cobalt), and NCA (nickel cobalt aluminum) batteries. Battery systems would require air conditioners or heat exchangers and inverters. In addition, a 15,000-gallon water tank is anticipated for each BESS unit/area.

Green Hydrogen Facility

The primary components of the green hydrogen facility would include an electrolyzer and a water treatment plant (WTP). The WTP will have reverse osmosis (RO) and Electrodeionization (EDI) facilities and ancillary equipment such as filters, storage tanks, backwash systems and chemical dosing systems. Additionally, the electrolyzer would include various electrical equipment such as transformers and rectifiers for the electrolyzer cell stacks. A dry cooling system and chiller would be used to reject heat from this equipment. Furthermore, a hydrogen dryer may be required to reduce the moisture content of the hydrogen product. Hydrogen can be stored, transported, and utilized as a compressed gas, as a liquid, or in chemical compounds. The approach to storage and transport will depend on the supply and end user requirements (i.e., storage in mobile applications will differ from storage at electrolysis production sites, or within a gas network). If required, the electrolyzer facility will include compression and/or liquefaction units to prepare the green hydrogen for transport. These compression units would consist of a centrifugal, axial, rotary, or ionic compressor, a liquefier/compressor coldbox, liquid nitrogen storage, and storage tanks for both pre-treated gaseous hydrogen and post-treated liquid/compressed hydrogen.

If the alternate green hydrogen component site is selected, the Project would include construction and operation of a green hydrogen-specific substation and switchyard with similar components to those described above for the step-up substation. The alternate green hydrogen substation and switchyard would be located adjacent to the alternate hydrogen facility on the west side of the Project.

Utility Switchyard

One utility-owned switchyard, approximately 1,000 by 1,600 feet (approximately 40 acres) in size would serve as the facility required to electrically connect the Project generation onto the utility's 500 kV transmission network. As shown in Figure 2, the utility switchyard would be located on the west side of the Project and serve as a termination point for the Project gen-tie and will initially loop in the Los Banos-Midway #2 500 kV transmission line. The utility switchyard would utilize high-voltage circuit breakers, switches, and series capacitor line compensation equipment in a breaker-and-a-half (BAAH) configuration and would be designed and constructed in alignment with the interconnecting utility's standards. Structural components in the BAAH switchyard area would include:

- One 140-foot-tall free-standing digital microwave antenna (radio tower) to support Supervisory Control and Data Acquisition System communication between the switchyard and the off-site PG&E Operations Center
- Series capacitor banks (sizing to be determined by utility requirements)
- Ten 500 kV steel A-frame dead-end poles up to 150 feet in height with foundations up to 20 feet deep or more
- Ten 500 kV steel H-frame dead-ends poles up to 150 feet in height with foundations up to 20 feet deep or more
- Busbar (a conducting bar that carries heavy currents to supply several electric circuits)
- Modular protection automation and control (MPAC) building(s) approximately 150 feet by 25 feet by 12 feet tall for PG&E's substation control and protection equipment. MPAC building will be installed on a concrete foundation
- Switchyard battery enclosure area(s) approximately 34 feet by 16 feet by 12 feet tall
- Circuit breakers and air disconnect switches
- On-site stormwater retention pond (1,000 feet by 100 feet) for temporary run-off storage during rainfall events
- Chain-link or similar security fencing up to 8 feet tall and two separate access gates plus one personnel gate

1.4 Construction Activities

Construction of all Project components would occur between 18 to 36 months, initiating in late 2025 or early 2026 with the facility placed into service by 2027 or 2028 depending on the construction schedule. Construction of the Project would include the following types of activities:

- Solar Facility, Substation, and Gen-tie
  - Phase 1: Site Preparation
  - Phase 2: PV Panel System
  - Phase 3: Inverters, Transformers, Substation, and Electrical
  - Phase 4: Gen-Tie
- BESS Facility (Phase 5)
- Green Hydrogen Facility (Phase 6)
- Utility Switchyard (Phase 7)

1.5 Operational Activities

Once completed, the Project would generally be limited to the following maintenance activities:

- Maintaining safe and reliable solar and clean green hydrogen generation
- Site Security
- Responding to automated electrical alters based on monitored data, including actual versus expected tolerances for system output and other key performance metrics
- Communicating with customers, transmission system operators, and other entities involved in facility operations

The Project would operate continuously, seven days a week, until the anticipated repowering or decommissioning in 35 years. Up to twelve average permanent staff associated with the solar facility would be on-site daily, with up to seventeen additional staff during intermittent solar panel washing, ongoing facility maintenance and repairs, and vegetation management activities. Up to four average permanent staff associated with the BESS would be on-site daily. In addition, up to 24 average permanent staff would be required for the operation of the green hydrogen facility daily. Alternatively, Project operators would be located off-site and would be on call to respond to alerts generated by the monitoring equipment at the Project site. Security personnel would be on-call. It is anticipated that permanent staff would be recruited from nearby communities in Fresno County. The operation and maintenance (O&M) building would house the security monitoring equipment, including security camera feeds for monitoring the Project 24 hours per day. Equipment repairs could take place in the early morning or evening when the facility would be producing the least amount of energy. Maintenance typically would include the following: Panel repairs; panel washing; maintenance of transformers, inverters, energy storage system, hydrogen components and other electrical equipment; road and fence repairs; and vegetation and pest management. The Applicant would recondition roads approximately once per year, such as after a heavy storm event that may cause destabilization or erosion. Solar panels would be washed as needed (up to four times each year) using light utility vehicles with tow-behind water trailers to maintain optimal electricity production. No heavy equipment would be used during normal operation. O&M vehicles would include trucks (pickup and flatbed), forklifts, and loaders for routine and unscheduled maintenance and water trucks for solar panel washing. Large heavy-haul transport equipment may be brought to the solar facility infrequently for equipment repair or replacement. No helicopter use is proposed during routine operations although they may be used for emergency maintenance or repair activities.

1.6 Decommissioning Activities

The facility's equipment has a useful life of approximately 35 years. At that time, the Applicant would seek to either repower or decommission the facility. In order to repower, the facility would likely be optimized to increase the plant's efficiency by replacing inverters with more efficient units, and potentially replacing some of the facility's panels. Ground disturbing work would not be necessary for optimization activities. The Project would be offline for several weeks or months during optimization activities but would subsequently continue delivering electricity to the wholesale market for many decades.

Decommissioning activities would require similar equipment and workforce as construction but would be substantially less intense. The following activities would be involved:

- Removal and transportation of all Project components from the facility site
- Removal of the solar panels, solar panel racking, steel foundation posts and beams, inverters, transformers, overhead and underground cables and lines, equipment pads and foundations, equipment cabinets, and ancillary equipment
- Dismantling and removal of the electrolyzer facility and WTP
- Removal of civil facilities, access roads, security fence, and drainage structures and sedimentation basins

2 Background

2.1 Overview of Sound Measurement

Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (California Department of Transportation [Caltrans] 2013).

Human Perception of Sound

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Crocker 2007).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud (Crocker 2007).

Sound Propagation and Shielding

Sound changes in both level and frequency spectrum as it travels from the source to the receptor. The most obvious change is the decrease in level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line, the path the sound will travel, site conditions, and obstructions). Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result from simply the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to a soft site (e.g., soft dirt, grass, or scattered bushes and trees) (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can substantially alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction

in source noise levels at the receptor (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce exposure to noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

Descriptors

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of Project noise impacts. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time.

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. It is also measured using the Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with an additional 5 dBA penalty to noise occurring during evening hours, between 7:00 p.m. and 10:00 p.m., and an additional 10 dBA penalty to noise occurring during the night, between 10:00 p.m. and 7:00 a.m., to account for the added sensitivity of humans to noise during these hours. Noise levels described by L_{dn} and CNEL usually differ by about 1 dBA. The relationship between the peak-hour L_{eq} value and the L_{dn}/CNEL depends on the distribution of traffic during the day, evening, and night.

Groundborne Vibration

Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernible, but without the effects associated with the shaking of a building, there is less adverse reaction.

Typical outdoor sources of vibration that propagates through the ground and creates perceptible groundborne vibration in nearby buildings include construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is fairly smooth, vibration from rubber-tired traffic is rarely perceptible (Federal Transit Administration [FTA] 2018).

Vibration amplitudes are usually expressed in peak particle velocity (PPV), or root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings (Caltrans 2020). The vibration velocity level threshold of perception for humans is approximately 0.035 in/sec PPV (Caltrans 2020).

2.2 Project Noise Setting

Sensitive Receptors

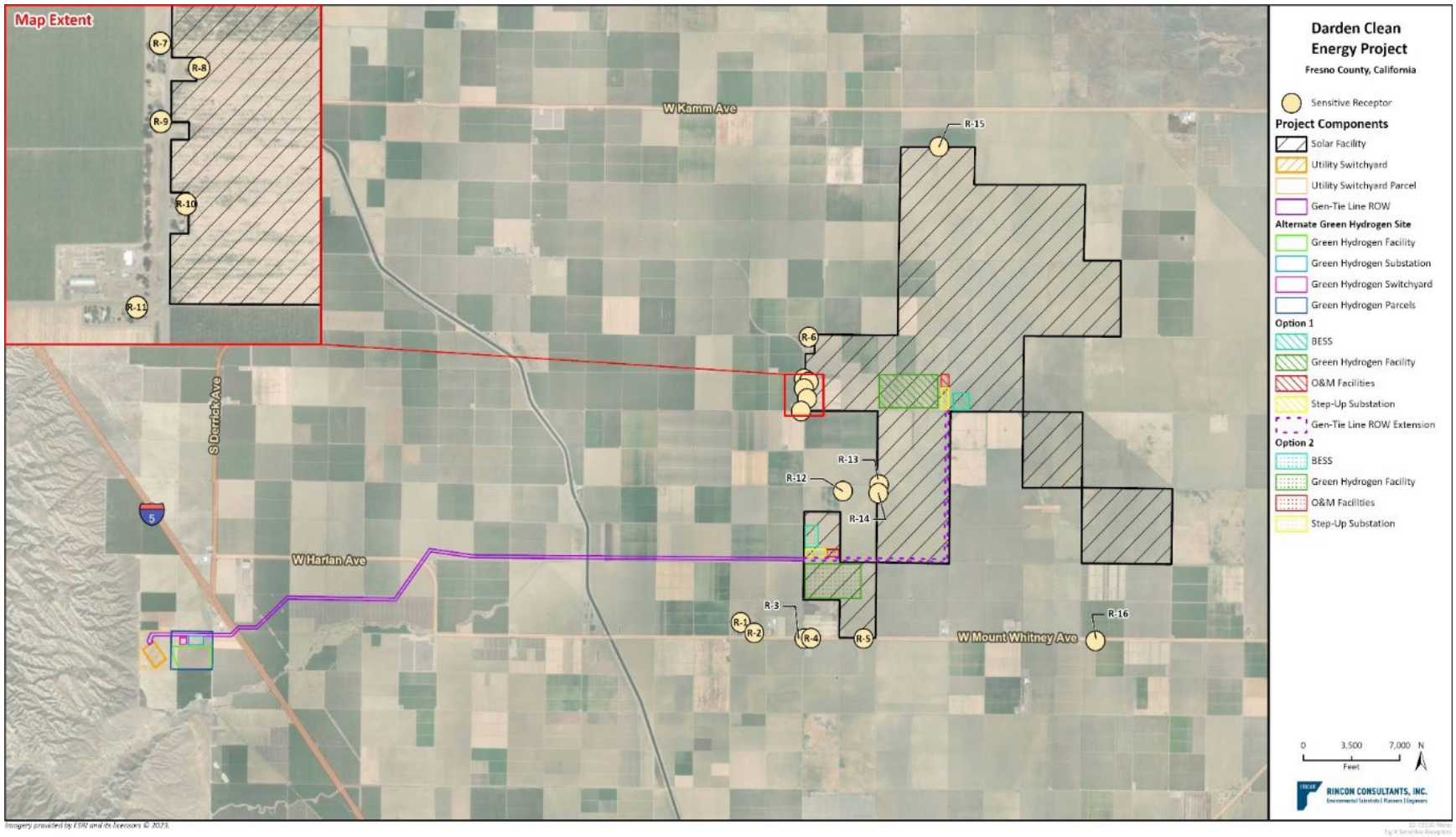
Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. The Noise Element of the Fresno County General Plan (2000) identifies residential, school, library, church, hospital, and nursing home uses as noise-sensitive land uses within the

County. Other sensitive receptors are identified as transient lodging and motel and hotel uses. The CEC identifies residences, hospitals, libraries, schools, places of worship, or other facilities where quiet is an important attribute of the environment as noise-sensitive land uses (Title 20, California Code of Regulations, Section 1704, Appendix B).

Vibration-sensitive receptors, which are similar to noise-sensitive receptors, include residences and institutional uses, such as schools, churches, and hospitals. However, vibration-sensitive receptors also include buildings where vibrations may interfere with vibration-sensitive equipment that is affected by vibration levels that may be well below those associated with human annoyance (e.g., recording studios or medical facilities with sensitive equipment) or historic buildings that could sustain damage from strong vibrations.

The Project site is immediately adjacent to sensitive receptors identified in the Fresno County General Plan and in CEC's requirements for Opt-In Applications (Title 20, California Code of Regulations, Section 1704, Appendix B). The sensitive receptors adjacent to the Project site include single family residents along South Sonoma Avenue, South Napa Avenue, and West Stroud Avenue. Additional nearby sensitive receptors from the Project site include single family residents along West Mt Whitney Avenue and West Cerini Avenue. Sensitive receptors are shown in Figure 3.

Figure 3 Location of Sensitive Receptors



Noise Measurements

The primary sources of noise on-site and in the surrounding area include motor vehicles, wind, and agricultural activities (e.g., farming equipment). The greatest vehicle noise occurs from vehicles on South Sonoma Avenue and West Mount Whitney Avenue. To evaluate existing noise levels in the area, six 15-minute noise measurements (ST1 through ST6) and one 24-hour noise measurement (LT-1) were taken on and near the Project site on April 24, 2023, and April 25, 2023, using an Extech, Model 407780A, ANSI Type II integrating sound level meter. In addition, a 25-hour noise measurement was taken at South Sonoma Avenue and West Harlan Avenue near the Project site on July 18, 2023, through July 19, 2023, also using the Extech in accordance with the CEC's requirements in Appendix B (Title 20, California Code of Regulations, Section 1704, Appendix B).

Figure 4 shows the locations of the noise measurements. The noise measurement locations were chosen to provide a representative range of ambient noise levels across the Project site and in the nearby area, especially near existing noise-sensitive residences and roadways. On April 24, 2023, and April 25, 2023, the daily high temperature was 84 degrees F with 75 percent humidity. The average wind was 3.8 miles per hour and there was no precipitation. On July 18, 2023, and July 19, 2023, the daily high temperature was 100 and 104 degrees F, respectively, with 60 percent humidity. The average wind was 2.5 miles per hour and there was no precipitation. The short-term noise measurement results are shown in Table 2. Table 3 reports traffic counts taken concurrently with sound level measurements. The 24-hour long-term noise measurement results are shown in Table 4, and 25-hour long-term measurement results are shown in Table 5[1] . Detailed noise meter outputs are included in Appendix J-1.

[1] The 24-hour long-term noise measurement is an industry standard to characterize ambient noise levels. To meet CEC's requirements for Opt-In Application (Title 20, California Code of Regulations, Section 1704, Appendix B), a 25-hour noise measurement was also taken.

Figure 4 Noise Measurement Locations

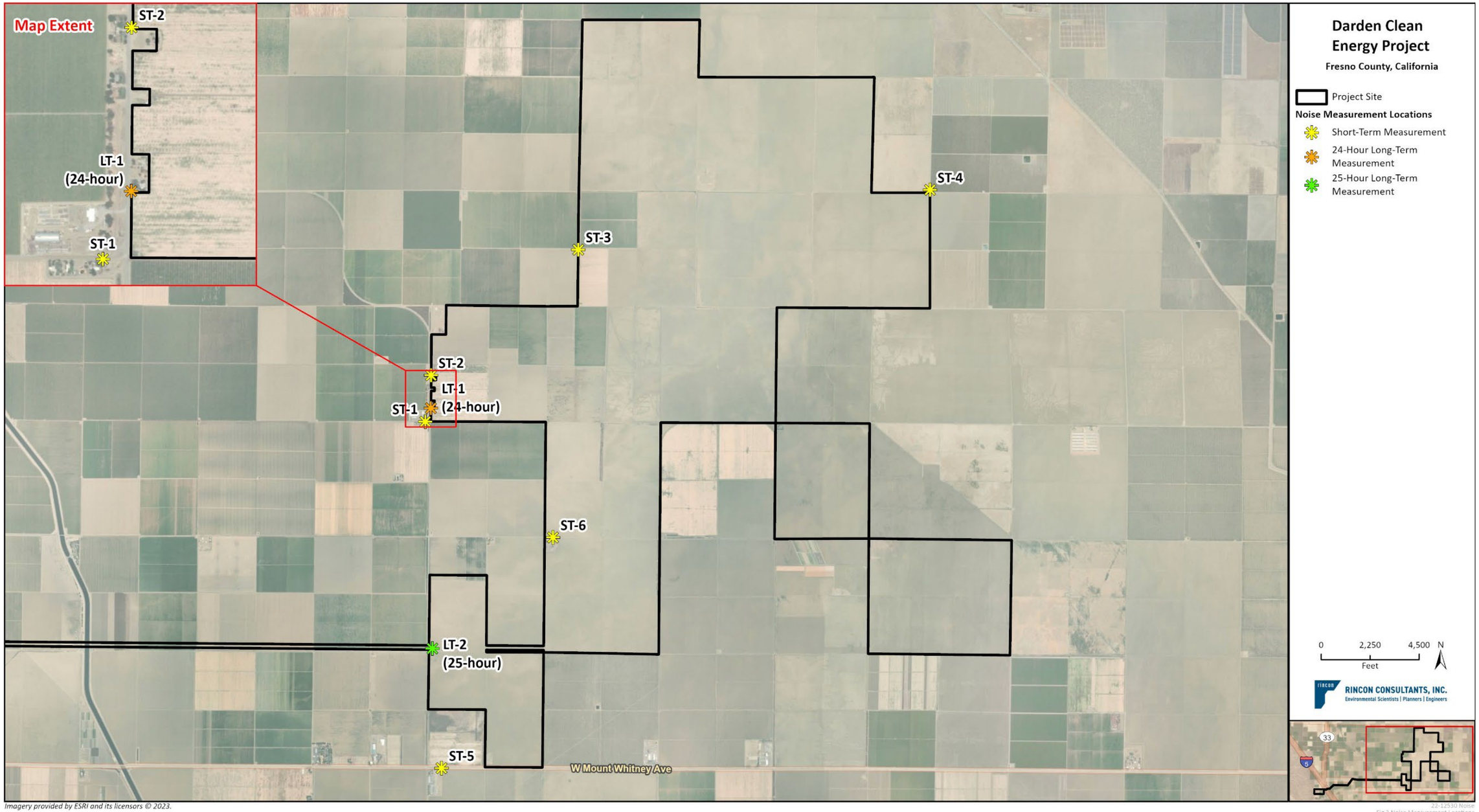


Table 2 Noise Monitoring Results in the Project Site Vicinity

Measurement Location		Sample Times	Approximate Distance to Primary Noise Source	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)
ST-1	Approximately 10 feet east from the shoulder of South Sonoma Avenue and West Davis intersection	10:45 – 11:00 a.m.	Approximately 35 feet from West Davis centerline	64.5	33.3	84.2
ST-2	West side of South Sonoma Avenue	11:27 – 11:42 a.m.	Approximately 15 feet from South Sonoma Avenue centerline	58.7	33.5	78.3
ST-3	North Side of South Napa Avenue	12:37 – 12:52 p.m.	Approximately 15 feet from South Napa Avenue centerline	63.3	32.0	84.1
ST-4	Approximately 110 feet south of South Yuba Avenue and West Clarkson Avenue intersection.	1:05 – 1:20 p.m.	Approximately 22 feet from South Yuba Avenue centerline	53.3	31.9	77.7
ST-5	North side of West Mount Whitney Avenue, and approximately 610 feet east of West Mount Whitney Avenue and South Sonoma Avenue intersection.	2:10 – 2:25 p.m.	Approximately 50 feet from West Mount Whitney Avenue centerline	67.3	36.5	85.0
ST-6	North of West Cerini Avenue and 300 yards west of South Napa Avenue	1:42 – 1:57 p.m.	Approximately 15 feet from West Cerini Avenue centerline	53.3	31.9	77.7

L_{eq} = average noise level equivalent; dBA = A-weighted decibel (for these measurements, the L_{eq} was over a 15-minute period).; L_{min} = minimum instantaneous noise level; L_{max} = maximum instantaneous noise level

See Figure 4for noise measurement locations.

Source: Rincon Consultants field measurements conducted on April 25, 2023 using ANSI Type II Integrating sound level meter. See Appendix J-1.

Table 3 Traffic Counts During Sound Level Monitoring

Measurement	Roadway	Traffic	Autos	Medium Trucks	Heavy Trucks
ST-1	South Sonoma Avenue – at West Davis Avenue	15-minute count	5	1	3
		One-hour equivalent	20	4	12
Percent			**55.6%**	**11.1%**	**33.3%**
ST-2	South Sonoma Avenue	15-minute count	10	2	2
		One-hour equivalent	40	8	8
Percent			**71.4%**	**14.3%**	**14.3%**
ST-3	South Napa Avenue	15-minute count	0	1	0
		One-hour equivalent	0	4	0
Percent			**0%**	**100%**	**0%**
ST-4	South Yuba Avenue – at West Clarkson Avenue	15-minute count	0	0	0
		One-hour equivalent	0	0	0
Percent			**0%**	**0%**	**0%**
ST-5	West Mount Whitney Avenue – at South Sonoma Avenue	15-minute count	14	6	5
		One-hour equivalent	56	24	20
Percent			**56%**	**24%**	**20%**
ST-6	West Cerini Avenue – west of South Napa Avenue	15-minute count	0	0	0
		One-hour equivalent	0	0	0
Percent			**0%**	**0%**	**0%**

Detailed traffic count data is included in Appendix J-1.

Table 4 24-Hour Long-Term Noise Measurement Results

Sample Time	dBA L_{eq}	Sample Time	dBA L_{eq}
24-hour Measurement – April 24 – 25, 2023			
11:20 a.m.	49	11:20 p.m.	52
12:20 p.m.	52	12:20 a.m.	39
1:20 p.m.	54	1:20 a.m.	30
2:20 p.m.	49	2:20 a.m.	35
3:20 p.m.	54	3:20 a.m.	34
4:20 p.m.	52	4:20 a.m.	51
5:20 p.m.	66	5:20 a.m.	57
6:20 p.m.	45	6:20 a.m.	57
7:20 p.m.	58	7:20 a.m.	44
8:20 p.m.	59	8:20 a.m.	55
9:20 p.m.	58	9:20 a.m.	55
10:20 p.m.	58	10:20 a.m.	53
24-hour Noise Level (dBA CNEL)			**61**

dBA = A-weighted decibels; L_{eq} = equivalent noise level; CNEL = community equivalent noise level

See Figure 4 for approximate noise measurement locations; see Appendix J-1 for full measurement graph.

Table 5 25-Hour Long-Term Noise Measurement Results

Sample Time	dBA L_{eq}	Sample Time	dBA L_{eq}
25-hour CEC Measurement – July 18 – 19, 2023			
3:45 p.m.	55	4:45 a.m.	60
4:45 p.m.	40	5:45 a.m.	65
5:45 p.m.	49	6:45 a.m.	53
6:45 p.m.	58	7:45 a.m.	51
7:45 p.m.	53	8:45 a.m.	59
8:45 p.m.	50	9:45 a.m.	54
9:45 p.m.	52	10:45 a.m.	54
10:45 p.m.	46	11:45 a.m.	52
11:45 p.m.	45	12:45 p.m.	60
12:45 a.m.	46	1:45 p.m.	66
1:45 a.m.	49	2:45 p.m.	55
2:45 a.m.	52	3:45 p.m.	44
3:45 a.m.	58		
25-hour Noise Level (dBA CNEL)			**64**

dBA = A-weighted decibels; L_{eq} = equivalent noise level; CNEL = community equivalent noise level

See Figure 4 for approximate noise measurement locations; see Attachment A for full measurement graph.

2.3 Regulatory Setting

Federal

40 Code of Federal Regulations Par 205, Subpart B – Medium and Heavy Trucks

40 Code of Federal Regulations (CFR), Part 205, Subpart B establishes federal noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating). The federal truck pass by noise standard is 80 dBA at 15 meters (approximately 50 feet) from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

Occupational Safety and Health Administration

OSHA regulates on-site noise levels. The permissible exposure level to noise for workers is 90 dBA over an 8-hour time-weighted average work shift, to protect hearing (29 CFR 1910.95 and for construction, 29 CFR 1926.52). If an employee is exposed to greater than 85 dBA as an 8-hour TWA, then a hearing conservation program is required to be implemented and to ensure exposure levels remain below 90 dBA 8-hour TWA through engineering controls or personal protective equipment (PPE) (29 CFR 1926.101 for construction-related PPE).

State

Cal/OSHA

Cal/OSHA has the same regulations as the federal OSHA regulations discussed above. The regulations are contained in Title 8, California Code of Regulations, General Industrial Safety Orders, Article 105, Control of Noise Exposure.

Local

Fresno County General Plan Noise Element

The Fresno County General Plan Health and Safety Element (Section G, Noise) identifies normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for a variety of land use and development types (Fresno County 2000). Table 6 shows the County of Fresno acceptable community noise exposure levels. As shown, ambient noise levels up to 75 dBA L_{dn}/CNEL are normally acceptable for utility uses while ambient noise levels up to 80 dBA L_{dn}/CNEL are conditionally acceptable (Fresno County 2000).

The Noise Element also includes policies designed to meet General Plan Goal HS-G, to "protect residential and other noise-sensitive uses from exposure to harmful or annoying noise levels." These policies address requirements for new noise-sensitive land uses, development in areas that may be exposed to high levels of noise, construction of new noise-generating uses, procedures for acoustical analysis and environmental review, and regulations for construction activity and the use of heavy construction equipment in accordance with the County's Noise Control Ordinance. The following policies are applicable to the Project:

Policy HS-G.1: The County shall require that all proposed development incorporate design elements necessary to minimize adverse noise impacts on surrounding land uses.

Policy HS-G.4: So that noise mitigation may be considered in the design of new projects, the County shall require an acoustical analysis as part of the environmental review process where:

18. Noise sensitive land uses are proposed in areas exposed to existing or projected noise levels that are "generally unacceptable" or higher according to Chart HS-1 [as reproduced in Table 6 below], "Land Use Compatibility for Community Noise Environments."

Table 6 Land Use Compatibility for Community Noise Environments

Land Use	Normally Acceptible[1]	Conditionally Acceptable[2]	Generally Unacceptable[3]	Clearly Unacceptable[4]
Residential – Low Density Single-family, Duplex, Mobile Homes	50-60	55-65	65-75	75-85
Residential – Multiple Family	50-60	55-65	65-75	75-85
Transient Lodging – Motels, Hotels	50-65	60-70	70-80	80-85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-60	55-65	65-75	75-85
Auditoriums, Concert Halls, Amphitheaters	–	50-70	–	65-85
Sports Arena, Outdoor Spectator Sports	–	50-75	–	70-85
Playgrounds, Neighborhood Parks	50-70	–	67.5-75	72.5-85

Land Use	Normally Acceptible[1]	Conditionally Acceptable[2]	Generally Unacceptable[3]	Clearly Unacceptable[4]
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-75	70-77.5	–	80-85
Office Buildings, Business Commercial and Professional	50-70	67.5-77.5	75-85	–
Industrial, Manufacturing, Utilities, Agriculture	50-75	70-80	75-85	–

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

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

18 Generally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

18 Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Fresno County 2000.

b. Proposed projects are likely to produce noise levels exceeding the levels shown in the County's Noise Control Ordinance at existing or planned noise-sensitive uses.

Policy HS-G.5: Where noise mitigation measures are required to achieve acceptable levels according to land use compatibility or the Noise Control Ordinance, the County shall place emphasis of such measures upon site planning and projects design. These measures may include, but are not limited to, building orientation, setbacks, earthen berms, and building construction practices. The County shall consider the use of noise barriers, such as sound walls, as a means of achieving the noise standards after other design-related noise mitigation measures have been evaluated or integrated into the projects.

Policy HS-G.6: The County shall regulate construction-related noise to reduce impacts on adjacent uses in accordance with the County's Noise Control Ordinance.

Policy HS-G.8: The County shall evaluate the compatibility of proposed projects with existing and future noise levels through a comparison to Chart HS-1 [as reproduced in Table 6 below], "Land Use Compatibility for Community Noise Environments."

Fresno County Noise Ordinance

The County's Code of Ordinances (Chapter 8.40, *Noise Control*) contains the noise measurement criteria, exterior noise thresholds, and noise source exemptions for the County, referred to as the "County's Noise Control Ordinance" in the General Plan. Section 8.40.040 (Exterior Noise Standards) states that it is unlawful for any person to create noise on a property "which causes the exterior noise level when measured at any affected single- or multiple-family residence, school, hospital, church or public library situation [sic] in either the incorporated or unincorporated area to exceed the noise level standards as set forth in the following table". Table 7 summarizes the five exterior noise level standards for the nearby sensitive receptors established in Section 8.40.040 of the County Code of Ordinances. Each standard limits the number of minutes within any given hour during which noise generated on a property may exceed a certain noise level at sensitive receptors. The standards apply within 50 feet of the structure of affected sensitive receptors (Section 8.40.030).

Table 7 Fresno County Exterior Noise Level Standards (dBA, L_{eq})

Category	Cumulative Number of Minutes in any 1-hour Time Period	Noise Level Standard (dBA)	
		Daytime 7:00 a.m.to 10:00 p.m.	Nighttime 10:00 p.m. to 7:00 a.m.
1	30	50	45
2	15	55	50
3	5	60	55
4	1	65	60
5	0	70	65

Notes: In the event the measured ambient noise level exceeds the applicable noise level standard in any category above, the applicable standard shall be adjusted so as to equal the ambient noise level. Each of the noise level standards specified above shall be reduced by 5 dBA for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be measured, the noise level measured while the source is in operation shall be compared directly to the noise level standards.

Source: Fresno County 1978

As indicated in Table 7, it would be unlawful for on-site equipment during the O&M phase of the Project to generate noise exceeding 50 dBA for 30 or more minutes in any daytime hour or 45 dBA in any nighttime hour within 50 feet of sensitive receptor structures.

Exempted activities from the County's Noise Control Ordinance applicable to the Project include:

- Noise sources associated with construction, provided such activities do not take place before 6:00 a.m. or after 9:00 p.m. on any day except Saturday or Sunday, or before 7:00 a.m. or after 5:00 p.m. on Saturday or Sunday; or
- Noise sources associated with work performed by private or public utilities in the maintenance or modification of its facilities.

In addition to the exterior noise standards, Section 8.40.090 of the Fresno County Municipal Code identifies a noise level limit of 50 dBA for electrical substations when measured 50 feet from an affected residence.

3 Impact Analysis

3.1 Methodology

To assess the potential for temporary construction and long-term operational noise impacts, noise-sensitive receptors closest to the Project site were identified. The analysis includes two Project construction duration scenarios: 36-months and 18-months. In addition, the Project is considering two locations (Option 1 and Option 2) for the step-up substation, BESS, and green hydrogen components; as well as one additional alternate site location for the green hydrogen component. Applicant-provided construction data were used for the 36-month and 18-month construction scenarios. The Project site is generally located in a rural, agricultural area, with nearby noise-sensitive receptors being residences associated with agricultural land located to the south, west, and east of the Project site. Figure 3 shows locations of noise-sensitive receptors. `

The nearest single-family residences are located to the west of the Project site along South Napa Avenue and South Sonoma Avenue. There are other residential uses to the south, west, and east of the site at varying distances from the Project site boundary.

Construction and Decommissioning Noise

The FHWA Roadway Construction Noise Model (RCNM) was used to estimate construction noise at nearby sensitive receptors. Construction noise modeling results are provided in Appendix J-2. RCNM provides reference noise levels at the standard distance of 50 feet and estimates noise levels at nearby sensitive receptors based on a standard noise attenuation rate of 6 dB per doubling of distance (line-of-sight method of sound attenuation for point sources of noise such as construction equipment). Table 8 shows the noise levels associated with heavy construction equipment at a reference distance of 50 feet from the source. As shown in this table, noise levels at this distance for individual equipment can range from about 74 to 85 dBA, depending upon the types of equipment in operation at any given time and phase of construction (FHWA 2006).

Table 8 Typical Construction Equipment Noise Levels

Equipment	Acoustical Usage Factor (%)[1]	Measured L_{eq} (dBA at 50 feet)
Augur Drill Rig	20	84
Backhoe	40	78
Compactor (ground)	20	83
Concrete Mixer Truck	40	85
Crane	16	85
Dozer	40	82
Dump Truck	40	76
Excavator	40	81
Flat Bed Truck	40	74
Front End Loader	40	79
Generator	50	81
Grader	40	83

Equipment	Acoustical Usage Factor (%)[1]	Measured L_{eq} (dBA at 50 feet)
Pickup Truck	40	75
Pneumatic Tools	50	85
Roller	20	80
Scraper	40	84
Warning Horn	5	83
Welder/Torch	40	74

[1] The average fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

Source: FHWA 2006

Although construction equipment may operate near the Project's property lines, construction equipment would be mobile throughout the day and would average a farther distance from the nearest residential property line over a typical construction day. This analysis conservatively assumes that in addition to the distance from the property line to each noise-sensitive receptor, over the course of a typical construction day the equipment would average at least 100 feet from the property lines (internal to the Project site) from each noise-sensitive receptor during site preparation and PV panel system phases. The remaining construction phases are estimated from the boundary of the component being constructed to the sensitive receptor property line. Consistent with industry standard, the loudest three pieces of equipment for each phase were modeled for the 36-month construction scenario. For the accelerated 18-month construction schedule, the loudest five pieces of equipment for each phase were modeled.

As stated in Section 1.6, *Decommissioning Activities*, at the end of the Project's useful life (anticipated to be 35 years), the proposed Project would be decommissioned in accordance with then-current decommissioning practices. At this time, it is not possible to quantitatively evaluate potential noise that would result from Project decommissioning, due to technology or construction practices that would be available at that time. Decommissioning activities would require similar equipment and workforce as construction but would be substantially less intense. However, based on current decommissioning practices and as a reasonable worst-case scenario, this analysis assumes that noise impacts generated during future decommissioning would be similar to noise impacts generated during the construction phase of the Project.

Construction Traffic Noise

Noise levels from existing traffic and with-construction traffic along West Mount Whitney Avenue, South Colusa Avenue, State Route (SR)-145, and SR-269 were estimated in terms of average daily traffic L_{dn} (See Appendix J-3 for noise calculations). Existing traffic volumes near the Project site are based on the Project's CEC Traffic Analysis prepared by VRPA Technologies, Inc. (VRPA Technologies, Inc. 2023). Daily vehicle trips for the 36-month and 18-month construction scenario would generate 2,400 worker and 280 haul trips and 3,010 worker and 345 haul trips, respectively. The total number of trips generated by the Project includes both inbound and outbound trips. The roadways were modeled conservatively using a straight-line analysis (i.e., assuming no attenuation from topography and a straight roadway).

Table 9 shows the estimated number of existing and construction-generated vehicle trips at the modeled roadway segments. Employee and truck trip distribution are shown in Figure 3-1a and Figure 3-1b of the CEC Traffic Analysis prepared for the Project by VRPA Technologies, Inc. (2023).

The table also includes the estimated speeds and distances to sensitive receptors for each roadway used in the model. The modal split for the existing traffic was assumed to be 73.0 percent passenger cars, 4.6 percent medium trucks, and 22.4 percent heavy trucks for each of the roadway segments, based on the Caltrans truck trips percentage at the nearest state route (CalTrans 2023)[2]. Model results are included in Appendix J-3.

Table 9 Existing and Daily Construction Vehicle Trips

Roadway Segment	Speed Limit (mph)	Centerline Distance to Closest Sensitive Receptor (feet)	Existing Daily Vehicle Trips	Existing + Daily Construction Vehicle Trip (36-months)	Existing + Daily Construction Vehicle Trips (18-months)
West Mount Whitney Avenue – SR-33 to Colusa Avenue	55	30	1,800	2,040	2,100
West Mount Whitney – South Colusa Avenue to SR-145	55	300	2,200	4,090	4,570
South Colusa Avenue – SR-145 to West Mount Whitney	55	25	850	1,120	1,190
SR-145 – I-5 to South Colusa Avenue	55	150	3,300	3,570	3,640
SR- 145 – Colusa to West Mount Whitney Avenue	55	35	4,100	4,100	4,100
SR-145 – West Mount Whitney Avenue and SR-180 – 1 Lane	55	45	7,300	8,470	8,170
SR-145 – West Mount Whitney Avenue and SR-180 – 2 Lanes	55	30	12,000	13,170	13,470
SR-269 – SR-198 and West Mount Whitney Avenue	55	40	4,100	4,820	5,000

Mph=miles per hour; SR = State Route..

On-Site Operational Noise

On-site operational noise sources were modeled with SoundPLAN. Propagation of modeled stationary noise sources was based on ISO Standard 9613-2, “Attenuation of Sound during Propagation Outdoors, Part 2: General Method of Calculation.” The assessment methodology assumes that all receptors would be downwind of stationary sources. This is a worst-case assumption for total noise impacts, since, in reality, only some receptors would be downwind at any one time.

Operational noise sources from the Project include PV solar arrays with associated electrical equipment (such as transformers and inverters), energy storage systems, substation equipment, green hydrogen facility, and the utility switchyard. Assumptions for these sources in this analysis are described below.

[2] Truck traffic counts from Caltrans between SR-33 and SR-145 are the nearest traffic volumes from the Project site. This modal split would best represent rural agriculture traffic around the Project site.

Solar Array Inverters-Transformers

Transformers would be co-located with the inverters and switchboards, which would lie within a battery enclosure on a concrete pad or steel skid. The Applicant indicates that these units would generate a noise level of 66 dBA at source power. In addition, PV panel noise would come from the tracking motors, which are driven by motors to make brief, incremental adjustments to track the arc of the sun to maximize the solar effect.

BESS

BESS enclosures would be approximately 40 or 52 feet long, with a width of 8 feet and a height of 8.5 feet. They would be installed on concrete foundation. The battery storage component would have a footprint of approximately 35 acres and would be immediately adjacent to the step-up substation. Two locations (Option 1 and 2 sites) are being considered for the BESS. Battery systems would require air conditioners or heat exchangers and inverters. The BESS units would require between 610 and 1,220 electrical enclosures, which may house Tesla Megapacks 2XL or similar equipment, throughout the BESS component area. According to Tesla, in the area the Project is located at, a 50 percent load for the Megapack 2XLs can be assumed, which is estimated to generate a sound pressure level of 62 dBA at 10 meters per Megapack 2XL (Tesla 2023).

Step-Up Substation

The step-up substation would step-up the medium voltage of the PV collector system from 34.5 kV to 500 kV. The step-up substation would be located on approximately 20 acres within the solar facility. Two locations (Option 1 and 2 sites) are being considered for the step-up substation. Noise sources within the step-up substation would include eight transformers. Each transformer would generate a noise level of 89 dBA L_{eq} at the source based on applicant-provided information.

Utility Switchyard

One utility-owned switchyard, approximately 40 acres in size, would serve as the facility required to electrically connect the Project generation onto the utility 500 kV transmission network. The utility switchyard would be located on the west side of the Project and serve as a termination point for the gen-tie line and would initially loop in the Los Banos-Midway #2 500 kV transmission line. The utility switchyard would not include any equipment that is a substantial source of noise. No substantial sources of operational noise would be generated at the utility switchyard.

Green Hydrogen Facility

The green hydrogen facility would have noise generating components, such as mechanical equipment. However, specific noise levels of potential green hydrogen-related equipment have not been confirmed in the current stage of engineering and design for the green hydrogen facility. Therefore, the green hydrogen facility is analyzed qualitatively.

Other Noise Sources

Noise levels from the PV tracking motors are discussed qualitatively due to the low and intermittent noise levels from these sources compared to the major noise sources above.

Operational Traffic Noise

Vehicle trips would be generated during Project O&M activities. The Project would generate 80 daily worker trips, based on the CEC Traffic Analysis (VRPA Technologies, Inc. 2023). The existing plus project traffic volumes used in this analysis are shown in Table 10. The significance of the Project's increase in traffic noise was determined using the Federal Aviation Administration recommended threshold.

Table 10 Existing and Daily Operational Vehicle Trips

Roadway Segment	Speed Limit (mph)	Centerline Distance to Closest Sensitive Receptor (feet)	Existing Daily Vehicle Trips	Existing + Daily Operational Vehicle Trips
West Mounty Whitney Avenue –SR-33 to Colusa Avenue	55	30	1,800	2,000
West Mount Whitney – South Colusa Avenue to SR-145	55	300	2,200	2,500
South Colusa Avenue – SR-145 to West Mount Whitney	55	25	850	950
SR-145 – I-5 to South Colusa Avenue	55	150	3,300	3,650
SR- 145 – Colusa to West Mounty Whitney Avenue	55	35	4,100	4,440
SR-145 – West Mount Whitney Avenue and SR 180 - 1Lane	55	45	7,300	8,100
SR-145 – West Mount Whitney Avenue and SR 180 – 2 Lanes	55	30	12,000	13,290
SR-269 – SR-198 and West Mount Whitney Avenue	55	40	4,100	4,550

Mph=miles per hour; SR = State Route..

Worker Construction and Operational Noise

During Project construction and operation, workers' exposure to temporary noise would vary depending on the construction phase of the Project and the proximity of the workers to the noise-generating activities. RCNM provides reference noise levels at the standard distance of 50 feet for individual equipment, as shown in Table 8, and can range from about 74 to 85 dBA, depending upon the types of equipment in operation at any given time and phase of construction. In addition, temporary use of helicopters during gen-tie and inverter, transformer, and electrical equipment construction phases would generate a noise level of approximately 95.9 dBA at 100 feet. Operational noise from the Project components would include transformers, inverters, batteries, and solar tracking. It is assumed workers would be exposed temporarily to noise levels at the source of noise generating equipment during construction and operation.

3.2 Significance Thresholds

Based on the CEQA Guidelines, a noise-related impact would be considered significant if the Project would result in one or more of the following conditions:

- 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

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

Construction Noise

As discussed in Section 2.3, Regulatory Setting, Fresno County does not specify quantitative construction noise limits. This analysis uses the FTA Transit Noise and Vibration Impact Assessment (FTA 2018) criteria. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction. For residential and commercial uses, the daytime noise threshold is 80 and 85 dBA L_{eq}, respectively, for an 8-hour period.

On-site Operational Noise

Operational noise was assessed using Fresno County's strictest exterior nighttime noise standard of 45 dBA L_{eq} within 50 feet of structures associated with residential or other noise-sensitive land uses.

Traffic Noise

A Project would normally have a significant effect on the environment related to noise if it would substantially increase the ambient noise levels in the areas around the Project. The following thresholds of significance, consistent with to those recommended by the Federal Aviation Administration, are used to assess traffic noise impacts at sensitive receptor locations (Federal Aviation Administration 2020):

- Greater than 1.5 dBA CNEL increase for ambient noise environments of 65 dBA CNEL and higher.
- Greater than 3 dBA CNEL increase for ambient noise environments of 60 to 64 dBA CNEL.
- Greater than 5 dBA CNEL increase for ambient noise environments of less than 60 dBA CNEL.

Vibration

Vibration associated with construction of the Project has the potential to be an annoyance to nearby land uses and sensitive receptors. Fresno County has not adopted limits for determining the significance of vibration impacts on structures or persons. The FTA criteria to evaluate the potential damage to buildings susceptible to architectural damage are shown in Table 11. For example, for Category III, (nonengineered timber and masonry buildings), a threshold of 0.2 in/sec PPV would apply for the analysis. The FTA also provides criteria for acceptable levels of groundborne vibration based on typical human response. This analysis uses 72 vibration decibels (VdB) as a threshold for potentially annoying groundborne vibration to residential receptors, as shown in Table 12.

Table 11 FTA Groundborne Vibration Architectural Damage Criteria

Building Category	PPV (in/sec)
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	0.02
IV Buildings extremely susceptible to vibration damage[1]	0.12

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
[1] Category IV applied to historic structures and buildings.
PPV = peak particle velocity; in./sec. = inches per second
Source: Caltrans 2020

Table 12 FTA Human Reaction to Typical Vibration Levels

Land Use Category	VdB (one microinch per second)
Category 1: Buildings where vibration qould interfere with interior operations	65[1,2]
Category II: Residences and buildings where people normally sleep	72[1]

VdB = Vibration Decibel
[1] Frequent Events: more than 70 events per day
[2] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.
Source: Appendix J

3.3 Impact Analysis

Threshold 1: Would the project result in generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? **Less Than Significant**

Impact N-1 CONSTRUCTION AND DEMOLITION ACTIVITIES ASSOCIATED WITH IMPLEMENTATION OF THE PROJECT WOULD INTERMITTENTLY GENERATE CONSTRUCTION AND DECOMMISSIONING NOISE WITHIN AND ADJACENT TO THE PROJECT SITE, HOWEVER, NOISE LEVELS WOULD NOT BE IN EXCESS OF ESTABLISHED STANDARDS. THIS IMPACT IS LESS THAN SIGNIFICANT.

Construction and Decommissioning Noise

Construction and decommissioning of the Project would involve the use of noise-generating equipment during various phases, including transport of personnel and materials to the site, heavy machinery used in grading and clearing the site, pneumatic post drivers to install foundation supports for solar sub-array panels, as well as equipment used during construction of the proposed solar facility, step-up substation, gen-tie line, BESS, green hydrogen facility, and utility switchyard. Construction activities at the Project components were modeled for a 36-month and 18-month construction period.

Heavy construction activities would normally occur on-site between the hours of 6:00 a.m. and 7:00 p.m., which is between the acceptable hours for construction listed in the Fresno County Noise

Ordinances (6:00 a.m. to 9:00 p.m., on weekdays) except for before 7:00 a.m. and after 5:00 p.m. on weekends.

Noise-sensitive receptors adjacent to Project construction along South Sonoma Avenue and South Sonoma Avenue include single-family residences. These land uses would experience a temporary increase in noise during construction of the Project. The following subsections detail the impacts to noise-sensitive receptors in proximity to the Project site and the gen-tie line corridor.

Solar Facility, Step-Up Substation, and Gen-Tie

SITE PREPARATION (PHASE 1)

Table 13 shows the estimated average noise level from the site preparation construction phase at the Project parcels to the nearest noise-sensitive land uses using RCNM for the 36-month and 18-month construction scenarios.

Table 13 Site Preparation Construction Noise Levels

Receptor	Distance from Construction (feet)[1]	36-Month Scenario Noise Level at Receptor (dBA L_{eq})	18-Month Scenario Noise Level at Receptor (dBA L_{eq})
Reference Distance	50	85	85
Single family residence on South Napa Avenue	100	79	79
Single-family residence on South Sonoma Avenue	163	74	75
Single-family residence on South Sonoma Avenue	271	70	71
Single family residence on South Sonoma Avenue	188	73	74
Single-family residence on West Elkhorn Avenue	533	64	65

See Appendix J-2 for model outputs.

[1] Distances include the distance from the Project parcel boundary to the receptors, plus 100 feet to account for construction equipment that would be mobile throughout the day and would average a farther distance (of approximately 100 feet) from the property line over a typical construction day.

For the 36-month construction period, the loudest anticipated construction noise from site preparation would potentially involve the simultaneous use of a rubber-tired dozer, tractor, and grader. As shown in Table 13, site preparation noise levels analyzed would reach up to 79 dBA L_{eq} at noise-sensitive receptors. This would be below FTA's daytime construction noise threshold of 80 dBA L_{eq}. For the 18-month construction period, the loudest anticipated construction noise from site preparation construction would potentially involve the simultaneous use of a backhoe, roller, rubber-tired dozer, tractor, and grader. The accelerated 18-month construction scenario during site preparation would reach up to 79 dBA L_{eq} at noise-sensitive receptors, which would be below FTA's threshold of 80 dBA L_{eq} for residential uses. Most of the site preparation construction activities would occur farther from the boundary of each parcel and farther from nearby noise-sensitive receptors than analyzed, which would result in lower noise levels than analyzed above. Therefore, daytime construction noise impacts from site preparation would be less than significant.

PV PANEL SYSTEM (PHASE 2)

The sensitive receptors closest to the PV panel system are residences east of South Napa Avenue, and east of South Sonoma Avenue with outdoor activity areas adjacent from the site. Table 14 shows construction noise levels at the nearest noise-sensitive receptors for the 36-month and 18-month construction scenarios.

Table 14 PV Panel System Construction Noise Levels

Receptor	Distance from Construction (feet)[1]	36-Month Scenario Noise Level at Receptor (dBA L_{eq})	18-Month Scenario Noise Level at Receptor (dBA L_{eq})
Reference Distance	50	85	86
Single family residence on South Napa Avenue	100	79	80[2]
Single-family residence on South Sonoma Avenue	163	74	75
Single-family residence on South Sonoma Avenue	271	70	71
Single family residence on South Sonoma Avenue	188	73	74
Single-family residence on South Yuba Avenue	533	64	65

See Appendix J-2 for model outputs.

[1] Distances include the distance from the Project parcel boundary to the receptors, plus 100 feet to account for construction equipment that would be mobile throughout the day and would average a farther distance (of approximately 100 feet) from the property line over a typical construction day.

[2] Construction equipment would generate 79.6 dBA.

For the 36-month construction period, the loudest anticipated construction noise from PV panel system construction would potentially involve the simultaneous use of a rubber tired dozer, grader, and a tractor. As shown in Table 14, simultaneous heavy equipment use during PV Panel System construction would generate a noise level of up to 79 dBA L_{eq} at noise-sensitive receptors. This would be below FTA's daytime construction noise threshold of 80 dBA L_{eq} for residential uses. For the 18-month construction period, the loudest anticipated construction noise from PV Panel System construction would potentially involve the simultaneous use of a bore/drill rig, backhoe, rubber tired dozer, tractor, and grader. The accelerated 18-month construction scenario would reach a maximum 79.6 dBA L_{eq} at one noise-sensitive receptors, which would be below FTA's threshold of 80 dBA L_{eq} for residential uses. Most construction activities would occur farther from the boundary of each parcel and farther from nearby noise-sensitive receptors than analyzed, which would result in lower noise levels than analyzed above. Therefore, daytime construction noise impacts from the PV panel system would be less than significant.

INVERTERS, TRANSFORMERS, STEP-UP SUBSTATION, AND ELECTRICAL (PHASE 3)

The sensitive receptors closest to the inverters, transformers, and electrical equipment are residences along West Stroud Avenue. Two locations (Option 1 and 2 sites) are being considered for the step-up substation and the residences closest to the step-up substation are located along West Cerini Avenue. These residences would experience a temporary increase in noise during construction of the Project.

Table 15 shows construction noise levels at the nearest noise-sensitive receptor. In addition, estimated average noise level for both 36-month and 18-month construction scenario.

Table 15 Inverters, Transformers, Step-Up Substation, and Electrical Construction Noise Levels

Receptor	Distance from Construction (feet)	36-Month Scenario Noise Level at Receptor (dBA L_{eq})	18-Month Scenario Noise Level at Receptor (dBA L_{eq})
Reference Distance	50	82	83
Inverter, Transformers, and Electrical Equipment			
Single-family residence nearest inverters, transformers, and electrical equipment.	721	59	60
Option 1 Step-Up Substation			
Single-family residence nearest the substation	6,920	40	40
Option 2 Step-Up Substation			
Single-family residence nearest the substation	4,225	44	44

See Appendix J-2 for model outputs.

For the 36-month construction period, the loudest anticipated construction noise from construction of the inverter, transformers, and electrical equipment would potentially involve the simultaneous use of a backhoe, tractor, and a trencher. As shown in Table 15, simultaneous heavy equipment use during inverter, transformer, and electrical construction would generate a noise level of up to 59 dBA L_{eq} at 721 feet from sensitive residential receptors. This would be below FTA's threshold of 80 dBA L_{eq} for residential uses exposed to daytime construction noise. For the 18-month construction scenario, the loudest anticipated construction noise would potentially involve the simultaneous use of a trencher, backhoe, tractor, welder, and crane. The accelerated 18-month construction scenario would reach up to 60 dBA L_{eq} at 721 feet from the nearest receptor and would be below FTA's daytime construction noise threshold of 80 dBA L_{eq} for residential uses.

The step-up substation is proposed at either of two locations (Option 1 or Option 2 sites). Simultaneous heavy equipment use during the 36-month step-up substation construction would generate a noise level at sensitive receptors of up to 44 dBA L_{eq} at 4,225 feet from the Option 2 site and 40 dBA L_{eq} at 6,920 feet from the Option 1 site. This would be below FTA's daytime construction threshold of 80 dBA L_{eq} for residential uses. For the 18-month construction period, the loudest anticipated construction noise from step-up substation construction would generate a noise level at sensitive receptors of up to 44 dBA L_{eq} at 4,225 feet from the Option 2 site and 40 dBA L_{eq} at 6,920 feet from the Option 1 site. This would also be below the FTA threshold.

The Project assumes Bell 500 helicopters would be utilized for approximately one month during this construction phase. The helicopters could operate 721 feet from the ground to the nearest sensitive receptor. Based on noise analyses prepared for similar transmission line work, the Bell 500 helicopters would generate 95.9 dBA at 100 feet (SCE 2013). Based on a standard noise attenuation rate of 6 dBA per doubling of distance, helicopters would generate approximately 79 dBA L_{eq} at the noise-sensitive receptors. This would be below FTA's daytime construction noise threshold of 80 dBA L_{eq} for residential uses.

In addition, most construction activities would occur farther from the boundary of each parcel and farther from nearby noise-sensitive receptors than analyzed, which would result in lower noise levels, especially in later construction phases when the loudest noise-generating equipment, such as pneumatic tools and graders, would no longer be used. Therefore, daytime construction noise impacts from the inverters, transformers, step-up substation, and electrical equipment would be less than significant.

Gen-Tie (Phase 4)

The gen-tie line may be routed along West Harland Avenue, up to ten miles west of the Project site, connecting to the utility switchyard. For the purposes of this analysis, at the closest point of construction, the gen-tie line would be located approximately 4,300 feet from the nearest single-family residence (a sensitive receptor) and 2,890 feet from Superior Almond Hulling LP, a commercial use. Helicopters would be used during construction of the gen-tie line. Table 16 shows construction noise levels at the nearest noise-sensitive receptor for both 36-month and 18-month construction scenarios.

Table 16 Gen-Tie Construction Noise Levels

Receptor	Distance from Construction (feet)	36-Month Scenario Noise Level at Receptor (dBA L_{eq})	18-Month Scenario Noise Level at Receptor (dBA L_{eq})
Reference Distance	50	78	80
Single family residence on West Harlan Avenue	4,300	39	41
Superior Almond Hulling LP	2,890	42	45

See Appendix J-2 for model outputs.

For the 36-month construction period, the loudest anticipated construction noise from gen-tie line construction would potentially involve the simultaneous use of a crane, aerial lift, and skid steer loader. As shown in Table 16, simultaneous heavy equipment use during gen-tie line construction would generate a noise level of up to 39 dBA L_{eq} at 4,300 feet from the nearest sensitive receptor and a noise level of up to 42 dBA L_{eq} at 2,890 feet from the nearest commercial building. For the 18-month construction scenario, the loudest anticipated construction noise would potentially involve the simultaneous use of a welder, crane, aerial lift, and two skid steer loaders. The accelerated schedule would reach up to 41 dBA L_{eq} at 4,300 feet from the nearest sensitive receptor and 45 dBA L_{eq} at 2,890 feet from the nearest commercial building. The accelerated construction schedule would be below FTA's threshold of 80 dBA L_{eq} for residential and 85 dBA L_{eq} for commercial uses.

The Project assumes Bell 500 helicopters would be utilized for approximately two months during this construction phase. The proposed helicopter activities could include the delivery of equipment and materials from staging yards to structure sites, structure placement, hardware installation, and conductor and/or optical ground wire stringing operations. The helicopters could operate 4,300 feet from the ground to the nearest sensitive receptor. Based on noise analyses prepared for similar transmission line work, Bell 500 helicopters would generate 95.9 dBA at 100 feet (SCE 2013). Based on a standard noise attenuation rate of 6 dBA per doubling of distance, helicopters would generate approximately 63 dBA L_{eq} at the nearest receptor. This would be below FTA's daytime construction noise thresholds of 80 dBA L_{eq} (8-hour) for residential land use and 85 dBA L_{eq} (8-hour) for commercial land uses. Therefore, daytime construction noise impacts from the gen-tie would be less than significant.

BESS (Phase 5)

Two locations (Option 1 and 2 sites) are being considered for the BESS. The Option 2 BESS is located approximately 2,290 feet from outdoor areas of sensitive receptors along West Cerini Avenue, and Option 1 is located approximately 7,145 feet from outdoor areas of sensitive receptors east of South Napa Avenue. Table 17 shows construction noise levels for the 36-month and 18-month construction scenarios for the BESS.

Table 17 BESS Construction Noise Levels

Receptor	Distance from Construction (feet)[1]	36-Month Scenario Noise Level at Receptor (dBA L_{eq})	18-Month Scenario Noise Level at Receptor (dBA L_{eq})
Reference Distance	50	83	83
Option 1			
Single-family residence on South Napa Avenue	7,145	39	40
Option 2			
Single-family residence on West Cerini Avenue	2,290	49	50

See Appendix J-2 for model outputs.

For the 36-month construction period, the loudest anticipated construction noise from BESS construction would potentially involve the simultaneous use of a skid steer loader, trencher, and a tractor. As shown in Table 17, simultaneous heavy equipment use during the BESS construction would generate a noise level at sensitive receptors of up to 49 dBA L_{eq} at 2,290 feet from the Option 2 site and 39 dBA L_{eq} at 7,145 feet from the Option 1 site. This would be below FTA's daytime construction noise threshold of 80 dBA L_{eq} for residential uses. For the 18-month construction period, the loudest anticipated construction noise from BESS construction would potentially involve the simultaneous use of a skid steer loader, trencher, backhoe, crane, and a tractor. The accelerated 18-month construction scenario would generate a noise level at sensitive receptors of up to 50 dBA L_{eq} at 2,290 feet from the Option 2 site and 40 dBA L_{eq} at 7,145 feet from Option 1 site. This would also be below the FTA threshold. Most construction activities would occur farther from the boundary of each parcel and farther from nearby noise-sensitive receptors than analyzed, which would result in lower noise levels than analyzed above. Therefore, daytime construction noise impacts from the BESS would be less than significant.

Green Hydrogen Facility (Phase 6)

Two locations (Option 1 and 2 sites) are being considered for the green hydrogen facility and an alternative green hydrogen facility site. The sensitive receptors closest to the green hydrogen facility are residences along West Mount Whitney Avenue and east of South Napa Avenue. Option 2 green hydrogen facility is approximately 2,720 feet from outdoor areas of sensitive receptors along West Mounty Whitney Avenue, and Option 1 is approximately 5,110 feet from outdoor areas of sensitive receptors east of South Napa Avenue. The alternative green hydrogen facility is approximately 6.5 miles from Cantua Creek Childhood Education Center, the nearest sensitive receptor. Noise generating equipment from the alternative green hydrogen facility would attenuate per doubling distance and generate negligible noise levels at Cantua Creek Childhood Education Center. Therefore, construction noise from the alternate green hydrogen facility would be less than significant.

Table 18 shows construction noise levels at the nearest noise-sensitive receptors for the 36-month and 18-month construction scenarios for the green hydrogen facility.

Table 18 Green Hydrogen Facility Construction Noise Levels

Receptor	Distance from Construction (feet)[1]	36-Month Scenario Noise Level at Receptor (dBA L_{eq})	18-Month Scenario Noise Level at Receptor (dBA L_{eq})
Reference Distance	50	85	86
Option 1			
Single-family residence on South Sonoma Avenue	5,110	44	45
Option 2			
Single family residence on West Mount Whitney Avenue	2,720	50	51

See Appendix J-2 for model outputs.

For the 36-month construction period, the loudest anticipated construction noise from the green hydrogen facility would potentially involve the simultaneous use of a bore/drill rig, grader, and a tractor. As shown in Table 18, simultaneous heavy equipment use during green hydrogen facility construction would generate a noise level at sensitive receptors of up to 50 dBA L_{eq} at 2,720 feet from the Option 2 site and 44 dBA L_{eq} at 5,110 feet from the Option 1 site. This would be below FTA's daytime construction noise threshold of 80 dBA L_{eq} for residential uses. For the 18-month construction period, the loudest anticipated construction noise from green hydrogen facility construction would potentially involve the simultaneous use of a backhoe, bore/drill rig, rubber tired dozer, tractor, and grader. The accelerated 18-month construction scenario would generate a noise level at sensitive receptors of up to 51 dBA L_{eq} at 2,720 feet from the Option 2 site and 45 dBA L_{eq} at 5,110 feet from the Option 1 site. This would also be below the FTA threshold. Most construction activities would occur farther from the boundary of each parcel and farther from nearby noise-sensitive receptors than analyzed, which would therefore result in lower noise levels than analyzed above. Therefore, daytime construction noise impacts from the green hydrogen facility would be less than significant.

Utility Switchyard (Phase 7)

The sensitive receptors closest to the utility switchyard are students located at Cantua Creek Childhood Education Center approximately 6.28 miles (33,158 feet) northeast of the Project site. Table 19 shows construction noise levels at the nearest noise-sensitive receptor and nearest commercial business, Tanimura + Antle Cooler business.

Table 19 Utility Facility Construction Noise Levels

Receptor	Distance from Construction (feet)[1]	36-Month Scenario Noise Level at Receptor (dBA L_{eq})	18-Month Scenario Noise Level at Receptor (dBA L_{eq})
Reference Distance	50	85	86
Cantua Creek Childhood Education Center	33,158	28	29
Tanimura + Antle Cooler business	5,320	44	45

See Appendix J-2 for model outputs.

For the 36-month construction period, the loudest anticipated construction noise from utility switchyard construction would potentially involve the simultaneous use of a dozer, grader, and a tractor. As shown in Table 19, simultaneous heavy equipment use during utility switchyard construction would generate a noise level of up to 28 dBA L_{eq} at 6.28 miles (33,158 feet) from the nearest sensitive receptor and a noise level of up to 44 dBA L_{eq} at 5,320 feet from the nearest commercial land use. This would be below FTA's construction noise threshold of 80 dBA L_{eq} for residential uses and 85 dBA L_{eq} for commercial land uses. For the 18-month construction period, the loudest anticipated construction noise from site preparation construction would potentially involve the simultaneous use of a bore/drill rig, roller, grader, dozer, and tractor. The accelerated 18-month construction scenario would reach up to 29 dBA L_{eq} at 6.28 miles (33,158 feet) from the nearest sensitive receptor and a noise level of up to 45 dBA L_{eq} at 5,320 feet from the nearest commercial land use. The 18-month construction period would be below FTA's threshold of 80 dBA L_{eq} for residential uses and 85 dBA L_{eq} for commercial uses. Therefore, daytime construction noise impacts from the utility switchyard would be less than significant.

Nighttime Construction

Per Section 8.40.060 of the Fresno County Code, construction activities before 6:00 a.m. or after 9:00 p.m. on any day except Saturday or Sunday, or before 7:00 a.m. or after 5:00 p.m. on Saturday or Sunday would not be exempt from the exterior noise standards. Heavy construction activity involving pneumatic tools and graders would not occur during nighttime hours. The Project would not include use of heavy construction equipment outside of the hours specified and no earlier than 6:00 a.m. Therefore, nighttime construction noise would not occur and there would be no impact.

Decommissioning

At the end of the Project's useful life (anticipated to be 35 years), the Project would seek to either repower or decommission the facility. To repower the facility, more efficient inverter units and some of the facility's panels would potentially be replaced. Given the Project's operating life cycle and distant timeframe for decommissioning activities, it is too speculative to quantify the potential noise impacts that could occur during decommissioning activities. Decommissioning would be substantially less intense than Project construction and would be roughly completed in three years, similar to Project construction. Assuming that the facility would be torn down and the materials present recycled or disposed, temporary noise associated with such actions is conservatively assumed to be generally similar to the noise levels that would result from Project construction. Similar to the noise generated during construction of the Project, decommissioning activities would be conducted in accordance with all applicable requirements in effect at the time of Project decommissioning. Potential future environmental effects associated with Project decommissioning would be addressed at the time decommissioning is proposed consistent with regulations in effect at that time. A final decommissioning plan, based on then-current technology, site conditions, and regulations, would be prepared prior to actual decommissioning.

Overall Project

Construction of the Project would involve the use of noise-generating equipment during various phases over 36-months or 18-months. As discussed above, noise generated during construction of each Project component would be less than significant. While construction phases would overlap temporally between various Project components throughout the construction period, construction of each Project component would be spatially distributed across the approximately 9,500-acre Project site. The large average distance between areas actively under construction during different

construction phases would ensure that noise generated does not compound resulting in a significant impact at a sensitive receptor location. Therefore, noise impacts associated with construction of the overall project would be less than significant.

Construction Traffic Noise

Construction of the Project would increase traffic noise off-site from commuting construction workers and from haul trucks bringing materials to and from the Project site. Project components could be constructed simultaneously over a 36-month period or an accelerated 18-month period. Construction activity for both scenarios could expose nearby residences to traffic noise increases associated with construction traffic. This analysis evaluates the construction traffic noise, based on daily vehicle trip generation from the CEC Traffic Analysis, for both construction timelines on each roadway segment. Table 9 in Section 3.1, *Methodology and Significance Thresholds*, compares existing daily traffic volumes on nearby road segments to anticipated traffic generated by Project construction.

36-Month Construction Period Construction

The Project would generate 2,400 daily worker trips and 280 daily haul trips during the 36-month construction scenario. Based on existing traffic volumes shown in Table 9, and the Project trip distribution from CEC Traffic Analysis, traffic noise levels would increase during construction shown in Table 20 for each roadway segment. Noise levels were estimated in terms of average daily traffic L_{dn} (See Appendix J-3 for noise calculations). As shown in Table 20, construction traffic would not increase ambient noise levels above the Federal Aviation Administration recommended noise level change for each roadway segment. Therefore, the short-term increase in traffic noise from Project construction during the 36-month construction period would be less than significant for all Project components.

Table 20 36-Month Construction Vehicle Trips Noise Levels

Roadway Segment	Centerline Distance to Closest Sensitive Receptor (feet)	Existing Daily Vehicle Trips	Existing + Daily Construction Vehicle Trips (36-months)	Existing Traffic Noise (dBA L_{dn})	Allowable Noise Level Increase (dBA L_{dn})	Existing + Project Traffic Noise (dBA L_{dn})
West Mount Whitney Avenue –SR-33 to Colusa Avenue	30	1,800	2,040	67.0	1.5	67.5
West Mount Whitney – South Colusa Avenue to SR-145	300	2,200	4,090	52.9	5	55.6
South Colusa Avenue – SR-145 to West Mount Whitney	25	850	1,120	64.9	3	66.1
SR-145 – I-5 to South Colusa Avenue	150	3,300	3,570	59.2	5	59.5
SR- 145 – Colusa to West Mount Whitney Avenue	35	4,100	4,100	69.6	1.5	69.6
SR-145 – West Mount Whitney Avenue and SR-180 – 1 Lane	45	7,300	8,470	70.5	1.5	71.1

Roadway Segment	Centerline Distance to Closest Sensitive Receptor (feet)	Existing Daily Vehicle Trips	Existing + Daily Construction Vehicle Trips (36-months)	Existing Traffic Noise (dBA L_{dn})	Allowable Noise Level Increase (dBA L_{dn})	Existing + Project Traffic Noise (dBA L_{dn})
SR-145 – West Mount Whitney Avenue and SR-180 – 2 Lanes	30	12,000	13,170	75.3	1.5	75.7
SR-269 – SR-198 and West Mount Whitney Avenue	40	4,100	4,820	68.3	1.5	69.0

Note: Federal Aviation Administration recommended traffic noise level threshold includes: greater than 1.5 dBA CNEL increase for ambient noise environments of 65 dBA CNEL and higher; greater than 3 dBA CNEL increase for ambient noise environments of 60 to 64 dBA CNEL; and greater than 5 dBA CNEL increase for ambient noise environments of less than 60 dBA CNEL

18-Month Construction Period

The Project would generate 3,010 daily worker trips and 345 daily haul trips during the 18-month construction scenario. Based on existing traffic volumes shown in Table 9, and the Project trip distribution from CEC Traffic Analysis, traffic noise levels would increase during construction shown in Table 21 for each roadway segment. Noise levels were estimated in terms of average daily traffic L_{dn} (See Appendix J-3 for noise calculations). As shown in Table 21, construction traffic would not increase ambient noise levels above the Federal Aviation Administration recommended noise level change for each roadway segment. Therefore, the short-term increase in traffic noise from Project construction during the 18-month construction period would be less than significant for all Project components.

Table 21 18-Month Construction Vehicle Trips Noise Levels

Roadway Segment	Centerline Distance to Closest Sensitive Receptor (feet)	Existing Daily Vehicle Trips	Existing + Daily Construction Vehicle Trips (18-months)	Existing Traffic Noise (dBA L_{dn})	Allowable Noise Level Increase (dBA L_{dn})	Existing + Project Traffic Noise (dBA L_{dn})
West Mount Whitney Avenue –SR-33 to Colusa Avenue	30	1,800	2,100	67.0	1.5	67.7
West Mount Whitney – South Colusa Avenue to SR-145	300	2,200	4,570	52.9	5	56.1
South Colusa Avenue – SR-145 to West Mount Whitney	25	850	1,190	64.9	3	66.4
SR-145 – I-5 to South Colusa Avenue	150	3,300	3,640	59.2	5	59.6
SR- 145 – Colusa to West Mount Whitney Avenue	35	4,100	4,100	69.6	1.5	69.6
SR-145 – West Mount Whitney Avenue and SR-180 – 1 Lane	45	7,300	8,170	70.5	1.5	71.0
SR-145 – West Mount Whitney Avenue and SR-180 – 2 Lanes	30	12,000	13,470	75.3	1.5	75.8

Roadway Segment	Centerline Distance to Closest Sensitive Receptor (feet)	Existing Daily Vehicle Trips	Existing + Daily Construction Vehicle Trips (18-months)	Existing Traffic Noise (dBA L_{dn})	Allowable Noise Level Increase (dBA L_{dn})	Existing + Project Traffic Noise (dBA L_{dn})
SR-269 – SR-198 and West Mount Whitney Avenue	40	4,100	5,000	68.3	1.5	69.2

Note: Federal Aviation Administration recommended traffic noise level threshold includes: greater than 1.5 dBA CNEL increase for ambient noise environments of 65 dBA CNEL and higher; greater than 3 dBA CNEL increase for ambient noise environments of 60 to 64 dBA CNEL; and greater than 5 dBA CNEL increase for ambient noise environments of less than 60 dBA CNEL

Construction Worker Exposure

Worker exposure levels during the construction of Project components would vary depending on the construction and the proximity of the workers to the noise-generating activities. The Occupational Health and Safety Administration (OSHA) requires a limit for worker exposure over 8-hours to 90 dBA. Based on RCNM provided reference noise levels, construction noise levels could be approximately 85 dBA at 50 feet from noise-generating equipment; however, if construction workers were to be located within 28 feet of the noise-generating equipment, such as adjacent to noise generating equipment workers would be exposed to a noise level above OSHA requirement, based on noise attenuation over distance. In compliance with OSHA requirements, the Project would develop a Hearing Protection Plan to ensure exposure levels remain below 90 dBA over 8-hours through engineering controls or PPE (29 CFR 1910.95 and 29 CFR 1926.101). This Hearing Protection Plan would be incorporated into the Project construction Health and Safety Plan; therefore, impacts to construction workers would be less than significant for all Project components.

Threshold 2: Would the project result in generation of a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? **Less Than Significant with Mitigation**

IMPACT N-2 OPERATIONAL ACTIVITIES ASSOCIATED WITH THE PROJECT (STATIONARY AND MOBILE) WOULD GENERATE NOISE THAT MAY PERIODICALLY BE AUDIBLE TO NOISE-SENSITIVE RECEPTORS NEAR THE PROJECT SITE. OPERATIONAL NOISE FROM THE SOLAR FACILITY, STEP-UP SUBSTATION, GEN-TIE, BESS, AND UTILITY SWITCHYARD WOULD NOT EXCEED COUNTY NOISE STANDARDS. HOWEVER, THE FINAL DESIGN AND PRECISE LOCATIONS OF THE NOISE GENERATING EQUIPMENT FOR THE GREEN HYDROGEN FACILITY IS CURRENTLY UNKNOWN. MITIGATION WOULD BE IMPLEMENTED TO CONDUCT A NOISE STUDY WHEN SPECIFICS ARE KNOWN AND MEASURES TO REDUCE NOISE. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

On-Site Operational Noise

Sensitive receptors near the Project site include the single-family residence along South Sonoma Avenue, South Napa Avenue, and across West Stroud Avenue and West Mount Whitney Avenue, as shown in Figure 3. Two locations (Option 1 and Option 2 sites) are proposed for the step-up substation and BESS. Noise levels from Project operation (i.e., transformers, inverters, step-up substation, and BESS equipment) are shown in Table 22, and noise level contours and receptor locations are shown in Figure 5 and Figure 6.

Figure 5 Receptor Locations and Operational Noise Contours For Option 1

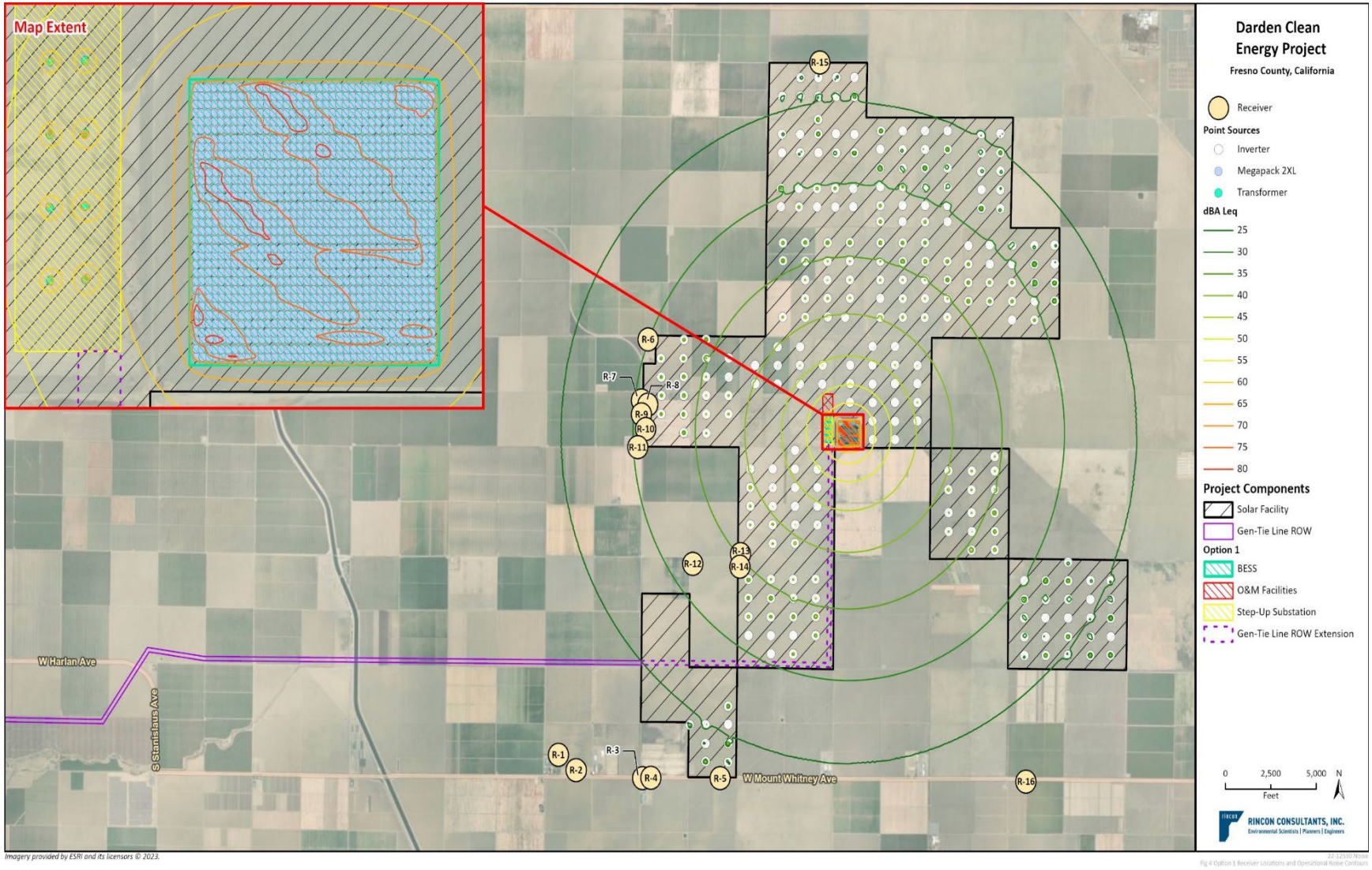


Figure 6 Receptor Locations and Operational Noise Contours For Option 2

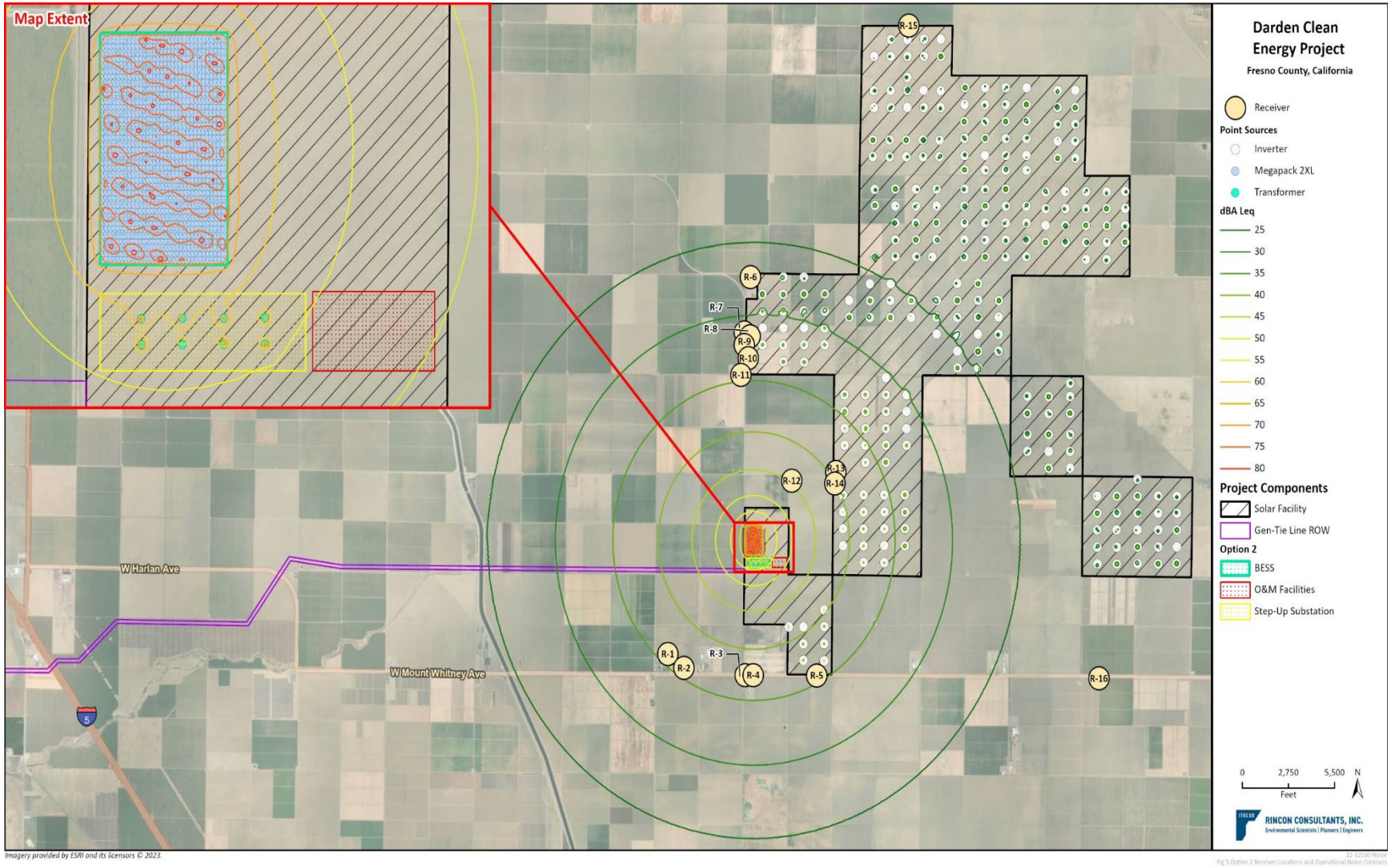


Table 22 Operational Noise Levels at Nearest Sensitive Receptors

Receptor	Receptor Description	Noise Level at Receptor[1]		Exceed Threshold (45 dBA L_{eq})?
		Option 1	Option 2	
R1	Residence southwest of the Project site and northwest of the West Mt Whitney Avenue and South Amador Avenue intersection	-9	36	No
R2	Residence southwest of the Project site and north of West Mt Whitney Avenue (east of R1).	-8	36	No
R3	Residence south of the Project site and southeast of the West Mt Whitney Avenue and South Sonoma Avenue intersection	-2	37	No
R4	Residence south of the Project site and southeast of the West Mt Whitney Avenue and South Sonoma Avenue intersection (east of R3)	-1	37	No
R5	Residence adjacent to the Project site on the southern portion of the PV solar arrays.	8	36	No
R6	Residence north and west of the Project site at the intersection of South Sonoma Avenue and West Elkhorn Avenue	30	27	No
R7	Residence west of the Project site and across South Sonoma Avenue	31	31	No
R8	Residence adjacent to the Project site along South Sonoma Avenue	31	32	No
R9	Residence west of the Project site and across South Sonoma Avenue (south of R7)	31	32	No
R10	Residence adjacent to the Project site along South Sonoma Avenue (south of R8)	31	33	No
R11	Residence west of the Project site and southwest of the South Sonoma Avenue and West Davis Avenue intersection	30	35	No
R12	Residence north, south, and west of the Project site along West Cerini Avenue.	32	45[2]	No
R13	Residence adjacent to the Project site and northeast of the West Cerini Avenue and South Napa Avenue intersection	35	39	No
R14	Residence adjacent to the Project site and southeast of the West Cerini Avenue and South Napa Avenue intersection	35	40	No
R15	Residence adjacent to the Project site at the northern portion of the PV solar arrays and along West Stroud Avenue	10	10	No
R16	Residence south of the Project site and northeast of the West Mt Whitney Avenue and South Lake Avenue intersection	-5	-5	No

[1]A zero decibel is the faintest sound that the human ear can hear without artificial help. Negative values means that you are a few times softer than the faintest sound.

[2]Noise level would be approximately 44.5 dBA $L_{eq.}$

Note: Appendix J-4 for Calculations completed in SoundPLAN; see Figure 3 for receptor locations.

Solar Facility, Step-Up Substation, and Gen-Tie

TRANSFORMERS, INVERTERS, AND STEP-UP SUBSTATION

As shown in Table 22, operational noise levels from the Project site would reach up to 45 dBA L_{eq} at one single-family residence along West Cerini Avenue, taking into account transformers, inverters, and step-up substation equipment, as well as BESS equipment (further discussed below). The remaining noise sensitive receptors would be exposed to noise levels below the 45 dBA threshold. These noise levels would not exceed Fresno County's strictest exterior noise standard of 45 dBA L_{eq}. In addition, these noise levels would be much lower than the long-term measurements shown in Table 4 and Table 5. Therefore, operational noise impacts from this Project component would be less than significant.

SOLAR SUB-ARRAY TRACKING MOTORS

PV panel noise would come from the tracking motors. These systems involve the panels being driven by motors to make brief, incremental adjustments to track the arc of the sun to maximize the solar effect. While these motors may generate noise of up to 44 dBA at 50 feet, these motors would operate briefly throughout an hour (e.g., several minutes per hour) as the sun moves west across the sky, and then would reset at night to face the eastern sky (Dudek 2018). By operating only several minutes per hour, the hourly noise level would be negligible at the nearest sensitive receptors. In addition, as observed during a site visit to existing solar farms in the area, noise levels from PV panel tracking motors were not detected over the existing ambient noise sources in the area (wind, vehicles, planes, and trains) just outside of the solar farm properties (Rincon 2020). Therefore, noise levels from the PV panels would be less than significant.

GEN-TIE

The gen-tie line would generate noise from the corona affect, which is a phenomenon associated with the electrical ionization of the air that occurs near the surface of the energized conductor and suspension hardware due to very high electric field strength. This is audible power line noise that is generated from electric corona discharge, which is usually experienced as a random crackling or hissing sound. The corona effect on the gen-tie line would generate a noise level of approximately 20 dBA at a distance of 50 feet (*California Valley Solar Project Final EIR*, San Luis Obispo County 2011). The Project would generate a noise level of 16 dBA, approximately 80 feet from the transmission lines to the edge of the gen-tie line corridor, based on gen-tie noise reference level. The distance to the nearest residence is more than 4,400 feet from the gen-tie line. As observed during a site visit to existing solar farms, noise levels from existing transmission lines were not detected over the existing ambient noise sources in the area (wind and vehicles) just outside of the solar farm properties (Rincon 2020). Therefore, per site observations and the general low noise of transmission lines, gen-tie noise would not exceed the County's standard of 45 dBA L_{eq} at the nearest residences, and impacts would be less than significant.

BESS

As shown in Table 22, operational noise levels from the Project site would reach up to 45 dBA L_{eq} at one single-family residence along West Cerini Avenue, taking into account BESS equipment, as well as transformers, inverters, and step-up substation equipment (discussed above). The remaining noise sensitive receptors would be exposed to noise levels below the 45 dBA threshold. Noise levels are highest from the BESS; however the facility is not located near sensitive receptors, and thus the noise

is heavily attenuated by distance by the time it reaches a sensitive receptor. These noise levels would not exceed Fresno County's strictest exterior noise standard of 45 dBA L_{eq}. In addition, these noise levels would be much lower than the long-term ambient noise levels shown in Table 4 and Table 5. Therefore, operational noise impacts from this Project component would be less than significant.

Green Hydrogen Facility

The primary components of the green hydrogen facility would include an electrolyzer and a water treatment plant. The electrolyzer would include various electrical equipment such as transformers and rectifiers for the electrolyzer cells stacks. In addition, a dry cooling system and chiller would be used to reject heat from the equipment. The noise generated by these types of mechanical equipment may be audible outside the facility. The alternate green hydrogen facility location is approximately 6.5 miles from Cantua Creek Childhood Education Center, the nearest sensitive receptor. Noise levels generated by equipment at the alternate green hydrogen facility would be negligible given the distance to Cantua Creek Childhood Education Center. Therefore, impacts from the alternate green hydrogen facility would be less than significant. For the Option 1 and Option 2 green hydrogen component sites, which are closer to sensitive receptors, specific noise levels and locations of potential green hydrogen-related equipment have not been confirmed in the current stage of engineering and design for the green hydrogen facility. Modeling noise levels from the green hydrogen facility at this time would be speculative. Therefore, noise generated from the Options 1 and 2 green hydrogen facility could increase operational noise above Fresno County's applicable exterior noise standards and impacts would be potentially significant.

Utility Switchyard

Transformers are noise-generating equipment typically found at switchyards; however, because the utility switchyard would interconnect the 500 kV gen-tie line to the Los Banos-Midway #2 500 kV transmission line, no transformers are anticipated; therefore, substantial operational noise would not be generated at the utility switchyard and there would be no impact from operation of this Project component. Therefore, operational of this Project component would have no impact.

Overall Project

As discussed above and shown in Table 22, operational noise levels from Project transformers, inverters, step-up substation equipment, and BESS equipment would not exceed Fresno County's strictest exterior noise standard of 45 dBA L_{eq}. Noise generated from the gen-tie would be minimal at approximately 16 dBA at the edge of the gen-tie line corridor, based on gen-tie noise reference level, and given the distance between gen-tie line components and other Project components, would not compound such that noise levels at a sensitive receptor would exceed the noise standard of 45 dBA L_{eq}. Moreover, noise associated with the utility switchyard and alternate green hydrogen facility would not exceed Fresno County's strictest exterior noise standard of 45 dBA L_{eq} and given these facilities would be located approximately 10 miles west of the solar facility, step-up substation, and BESS facility, noise generated from these Project components would not compound such that noise levels at a sensitive receptor would exceed the noise standard of 45 dBA L_{eq}. Noise generated from the Options 1 and 2 green hydrogen facility could increase operational noise above Fresno County's exterior noise standards and mitigation would be necessary to reduce impacts to a less than significant level; therefore, operational noise impacts from the overall Project would be less than significant with mitigation.

Operational Traffic Noise

Once the Project is complete, vehicle trips to the Project site would be associated with operations and maintenance of the Project components. The Project would generate approximately 80 daily worker trips. Based on existing traffic volumes shown in Table 9, and the Project trip distribution from CEC Traffic Analysis, traffic noise levels would increase during Project operation shown in Table 23 for each roadway segment. Noise levels were estimated in terms of average daily traffic L_{dn} (See Appendix J-3 for noise calculations). As shown in Table 23, operational traffic would not increase ambient noise levels above the Federal Aviation Administration recommended noise level change for each roadway segment. Therefore, the long-term increase in traffic noise from Project operations would be less than significant.

Table 23 Operational Vehicle Trips

Roadway Segment	Centerline Distance to Closest Sensitive Receptor (feet)	Existing Daily Vehicle Trips	Existing + Daily Operational Vehicle Trips	Existing Traffic Noise (dBA L_{dn})	Allowable Noise Level Increase (dBA L_{dn})	Existing + Project Traffic Noise (dBA L_{dn})
West Mount Whitney Avenue –SR-33 to Colusa Avenue	30	1,800	2,000	67.0	1.5	67.5
West Mount Whitney – South Colusa Avenue to SR-145	300	2,200	2,500	52.9	5	53.5
South Colusa Avenue – SR-145 to West Mount Whitney	25	850	950	64.9	3	65.4
SR-145 – I-5 to South Colusa Avenue	150	3,300	3,650	59.2	5	59.6
SR- 145 – Colusa to West Mount Whitney Avenue	35	4,100	4,100	69.6	1.5	69.9
SR-145 – West Mount Whitney Avenue and SR-180 – 1 Lane	45	7,300	8,100	70.5	1.5	71.0
SR-145 – West Mount Whitney Avenue and SR-180 – 2 Lanes	30	12,000	13,290	75.3	1.5	75.7
SR-269 – SR-198 and West Mount Whitney Avenue	40	4,100	4,550	68.3	1.5	68.5

Note: Federal Aviation Administration recommended traffic noise level threshold includes: greater than 1.5 dBA CNEL increase for ambient noise environments of 65 dBA CNEL and higher; greater than 3 dBA CNEL increase for ambient noise environments of 60 to 64 dBA CNEL; and greater than 5 dBA CNEL increase for ambient noise environments of less than 60 dBA CNEL

Operational Worker Noise

Operation and maintenance workers would be exposed to noise generating equipment, such as transformers, inverters, batteries, and solar tracking noise. Based on the reference noise levels for each piece of equipment, noise levels from the BESS would generate the highest noise levels to operational workers. The batteries would generate a noise level of 103 dBA at the source (immediately adjacent to the equipment). Based on the noise levels of outdoor components, worker exposure to elevated noise levels in the outdoor environment would be limited to periods of time while working directly on, or next to noise generating equipment. Additionally, because there are no permanent or semi-permanent workstations located near any piece of noisy outdoor equipment, no visiting worker's time-weighted average exposure to noise would routinely approach the maximum level allowable under OSHA standards (29 Code of Federal Regulations 1910.95). As required by OSHA, signs requiring the use of hearing protection devices would be posted in all areas where noise levels commonly exceed 85 dBA, such as inside the battery enclosures. Therefore, noise impacts to visiting workers during operation and maintenance activities for all Project components would be less than significant.

Mitigation Measures

NOI-1 Green Hydrogen Facility Noise Analysis and Design Requirements

During final engineering, when the precise locations and design details of the green hydrogen facility is finalized, a qualified acoustician should conduct a quantitative analysis of the operational noise levels from such sources to determine if the noise generating equipment from the green hydrogen facility would result in an exceedance of Fresno County's applicable exterior noise level standards. If the green hydrogen facility would not exceed established thresholds, no noise reduction measures would be necessary. However, if it is determined that the green hydrogen facility could potentially result in exceedance of the County's exterior noise standards, the Applicant should be required to implement additional feasible measures to minimize noise generated at the green hydrogen facility. Such additional measures to reduce noise generation equipment impacts may include, but are not limited to,, setbacks, barriers, and other shielding techniques. The additional measures must reduce noise levels below Fresno County's applicable exterior nighttime noise standards. A qualified acoustician should prepare a report to demonstrate the additional measures would be consistent with Fresno County's exterior noise standards for CEC review and approval. The CEC should verify these additional measures are included on the final site plan prior to issuing construction permits/approvals for the green hydrogen facility.

Significance After Mitigation

Implementation of Mitigation Measure NOI-1 would require additional quantitative noise analysis once the final design of the green hydrogen facility is complete, which includes identifying the locations of the noise generating equipment. If noise levels are determined to exceed County exterior noise standards, the mitigation measure would reduce stationary noise through measures such as the implementation of barriers, setbacks, other shielding techniques. A qualified acoustician will prepare a report to demonstrate consistency with Fresno County's applicable exterior noise standards with the incorporation of mitigation measures. With implementation of Mitigation Measure NOI-1, noise generated by the green hydrogen facility would be reduced to acceptable levels and impacts would be less than significant.

Threshold 3: Would the project result in generation of excessive groundborne vibration or groundborne noise levels? **Less Than Significant**

IMPACT N-3 CONSTRUCTION ACTIVITIES ASSOCIATED WITH IMPLEMENTATION OF THE PROJECT WOULD INTERMITTENTLY GENERATE GROUNDBORNE VIBRATION WITHIN AND ADJACENT TO THE PROJECT SITE. HOWEVER, VIBRATION LEVELS WOULD NOT EXCEED STANDARDS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction

Construction at the Project components may require post driving that has the potential to result in temporary vibration impacts to structures and sensitive receptors. It was conservatively assumed that an impact pile driver, as discussed in FTA's *Transit Noise and Vibration Impact Assessment Manual* (Caltrans 2020), would be used for the Project. It should be noted that an impact pile driver as considered by FTA is larger than the type of equipment that would be used to drill in posts for the fence post, PV panels, and BESS yard (e.g., an impact pile driver on the scale analyzed by FTA would typically be used for large bridge concrete footings). Other construction activities are less intensive than pile driving and would have lower PPV than pile driving. Therefore, vibration levels from pile driving are considered a conservative scenario for construction at the solar facility and BESS. Other Project components would not require construction techniques with the potential to generate excessive groundborne vibration.

Solar Facility, Step-Up Substation and Gen-Tie

SITE PREPARATION AND PV PANEL SYSTEM CONSTRUCTION (PHASE I AND PHASE 2)

Based on the potential site locations, post driving activities during site preparation and PV panel system construction could occur within 63 feet of the nearest off-site residential structure. Using the referenced vibration levels for the post driver, the in./sec. PPV at the nearest residential structure would be 0.16 in./sec. PPV at 63 feet, which would be below the FTA continuous/frequent intermittent sources threshold for damage potential to older residential structures of 0.2 in./sec. PPV (see Appendix J-5). In addition, use of a static roller would generate a vibration level of 82 VdB at 25 feet. The human annoyance threshold is compared against the average vibration over time; therefore, vibration levels would be approximately 64 VdB at 100 feet and below the threshold of 72 VdB at the residential building. Therefore, vibration impacts associated with construction of this Project component would be less than significant.

BESS (Phase 5)

Option 1 BESS is located approximately 7,145 feet from outdoor areas of sensitive receptors east of South Napa Avenue. Pile driving activity could potentially occur throughout the BESS facility location. The nearest sensitive receptor from pile driving activity is approximately 7,145 feet. Using the referenced vibration levels for the post driver, the in./sec. PPV at the nearest residential structure would be less than 0.001 in./sec. PPV at 7,145 feet, which would be below the FTA continuous/frequent intermittent sources threshold for damage potential to older residential structures of 0.2 in./sec. PPV. In addition, use of a static roller would generate a vibration level of 82 VdB at 25 feet. The human annoyance threshold is compared against the average vibration over time; therefore, vibration levels would be approximately 8 VdB at 7,145 feet and below the threshold of 72 VdB at the residential building. The Option 2 BESS is located southeast of the intersection of South

Sonoma Avenue and West Harlan Avenue. The nearest sensitive receptor from pile driving activity is approximately 2,290 feet. The vibration level at the nearest residential structure would be 0.001 in./sec. PPV at 2,290 feet, which would be below the FTA continuous/frequent intermittent sources threshold for damage potential to older residential structures of 0.2 in./sec. PPV (see Appendix J-5 for vibration calculations). In addition, use of a static roller would generate a vibration level of 82 VdB at 25 feet. The human annoyance threshold is compared against the average vibration over time; therefore, vibration levels would be approximately 23 VdB at 2,290 feet and below the threshold of 72 VdB at the residential building. Therefore, vibration impacts associated with construction of this Project component would be less than significant.

Overall Project

As discussed above, vibration impacts from construction of the solar facility, step-up substation, gen-tie and BESS components would be less than significant and all other Project components would not require construction techniques with the potential to generate excessive groundborne vibration. Given the distance between these Project components and the temporary nature of Project construction, vibration impacts from the overall Project would be less than significant.

Operation

Once constructed, the Project would not have any components that would generate vibration levels. Thus, operation of the overall Project would not result in any vibration and impacts would be less than significant.

Threshold 4: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? **No Impact**

IMPACT N-4 THE PROJECT SITE IS LOCATED OUTSIDE OF NOISE CONTOURS ASSOCIATED WITH AIRPORTS. THEREFORE, THE PROJECT WOULD NOT BE EXPOSED TO EXCESSIVE NOISE LEVELS FROM AIRCRAFT OPERATIONS AND NO IMPACT WOULD OCCUR.

The airport nearest to the Project site, San Joaquin Airport, is located approximately 5.5 miles to the northeast. The San Joaquin Airport is private and small general aviation facility. Smaller aviation facilities operate throughout Fresno County, but are much less important sources of noise because their traffic tends to be less frequent and made up of smaller, quieter aircrafts (Fresno County 2000). Given the distance to and private-nature of the San Joaquin Airport, on-site construction workers or maintenance staff would not be exposed to airport noise, and no impacts would occur.

4 Conclusions

The Project would generate both temporary construction-related noise and long-term noise associated with operation of the Project. Construction noise would not exceed the FTA's construction noise threshold of 80 dBA L_{eq} for an 8-hour period and impacts from construction noise would be less than significant. Stationary noise sources from the solar facility, step-up substation, BESS, utility switchyard, and gen-tie line would not exceed County standards at the nearest sensitive receivers. However, the green hydrogen facility final designs are currently unknown and may increase operational noise over Fresno County exterior noise standards. With the incorporation of Mitigation Measure NOI-1, operational noise levels would be below Fresno County standards. Therefore, stationary noise impacts would be less than significant with mitigation incorporated. Project-generated traffic would generate an increase of up to 3 dBA at adjacent roadways. This is below the recommended traffic noise threshold from the Federal Aviation Administration; therefore, the off-site traffic noise increases would be less than significant. The Project would generate groundborne vibration during construction. Groundborne vibration would not exceed the applicable vibration threshold at the nearest structures, and construction-related vibration impacts would be less than significant. The Project site is approximately 5.5 miles from the nearest airport, San Joaquin Airport. The San Joaquin Airport is for private use and would have less important sources of noise because their traffic tends to be less frequent and made up of smaller aircraft. Therefore, airport noise is less than significant.

5 References

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Appendix J-1

On-Site Noise Measurement Data

24-Hour Noise Measurement Avg Leq, CNEL, and Ldn Calculation Spreadsheet

Instructions

1. Open meter data in Excel.
2. Copy and paste values for into highlighted cells in spreadsheet.

Results	
24-hour average Leq	56.1
CNEL	61.4
Ldn	60.8

Duration (seconds) 240

No.s	Date Time	Date	Time	dB	Leq Sound Energy
1	4/24/2023 11:21	4/24/2023	11:21:16 AM	55.4	83216844.11
2	4/24/2023 11:25	4/24/2023	11:25:16 AM	54.4	66101488.88
3	4/24/2023 11:29	4/24/2023	11:29:16 AM	52.7	44690091.28
4	4/24/2023 11:33	4/24/2023	11:33:16 AM	41	3021420.988
5	4/24/2023 11:37	4/24/2023	11:37:16 AM	39.8	2291982.206
6	4/24/2023 11:41	4/24/2023	11:41:16 AM	40	2400000
7	4/24/2023 11:45	4/24/2023	11:45:16 AM	32.9	467962.7039
8	4/24/2023 11:49	4/24/2023	11:49:16 AM	32.1	389234.4234
9	4/24/2023 11:53	4/24/2023	11:53:16 AM	35	758946.6384
10	4/24/2023 11:57	4/24/2023	11:57:16 AM	52.4	41707219.89
11	4/24/2023 12:01	4/24/2023	12:01:16 PM	41.7	3549860.132
12	4/24/2023 12:05	4/24/2023	12:05:16 PM	45.9	9337083.48
13	4/24/2023 12:09	4/24/2023	12:09:16 PM	45.8	9124545.512
14	4/24/2023 12:13	4/24/2023	12:13:16 PM	48.4	16603943.3
15	4/24/2023 12:17	4/24/2023	12:17:16 PM	32.1	389234.4234
16	4/24/2023 12:21	4/24/2023	12:21:16 PM	53.4	52506278.97
17	4/24/2023 12:25	4/24/2023	12:25:16 PM	49.3	20427312.92
18	4/24/2023 12:29	4/24/2023	12:29:16 PM	49.9	23453693.3
19	4/24/2023 12:33	4/24/2023	12:33:16 PM	36.7	1122564.339
20	4/24/2023 12:37	4/24/2023	12:37:16 PM	47.9	14798280.04
21	4/24/2023 12:41	4/24/2023	12:41:16 PM	45.5	8515521.342
22	4/24/2023 12:45	4/24/2023	12:45:16 PM	50.8	28854346.43
23	4/24/2023 12:49	4/24/2023	12:49:16 PM	45.6	8713873.314
24	4/24/2023 12:53	4/24/2023	12:53:16 PM	48.9	18629930.8
25	4/24/2023 12:57	4/24/2023	12:57:16 PM	45.3	8132259.747
26	4/24/2023 13:01	4/24/2023	1:01:16 PM	55.1	77662477.66
27	4/24/2023 13:05	4/24/2023	1:05:16 PM	47.7	14132247.73
28	4/24/2023 13:09	4/24/2023	1:09:16 PM	51.9	37171598.85
29	4/24/2023 13:13	4/24/2023	1:13:16 PM	60.4	263154767.1
30	4/24/2023 13:17	4/24/2023	1:17:16 PM	43	4788629.556
31	4/24/2023 13:21	4/24/2023	1:21:16 PM	55.8	91245455.12
32	4/24/2023 13:25	4/24/2023	1:25:16 PM	44.6	6921675.608
33	4/24/2023 13:29	4/24/2023	1:29:16 PM	42.3	4075784.766
34	4/24/2023 13:33	4/24/2023	1:33:16 PM	42.8	4573105.723
35	4/24/2023 13:37	4/24/2023	1:37:16 PM	55	75894663.84
36	4/24/2023 13:41	4/24/2023	1:41:16 PM	45.2	7947146.916
37	4/24/2023 13:45	4/24/2023	1:45:16 PM	43	4788629.556
38	4/24/2023 13:49	4/24/2023	1:49:16 PM	59.2	199623305.1
39	4/24/2023 13:53	4/24/2023	1:53:16 PM	47.2	12595379.05

40	4/24/2023 13:57	4/24/2023	1:57:16 PM	50.6	27555686.92
41	4/24/2023 14:01	4/24/2023	2:01:16 PM	34.4	661014.8888
42	4/24/2023 14:05	4/24/2023	2:05:16 PM	61.6	346905545
43	4/24/2023 14:09	4/24/2023	2:09:16 PM	51.4	33129222.35
44	4/24/2023 14:13	4/24/2023	2:13:16 PM	46.1	9777126.667
45	4/24/2023 14:17	4/24/2023	2:17:16 PM	42.2	3983008.578
46	4/24/2023 14:21	4/24/2023	2:21:16 PM	35.3	813225.9747
47	4/24/2023 14:25	4/24/2023	2:25:16 PM	45.6	8713873.314
48	4/24/2023 14:29	4/24/2023	2:29:16 PM	52.3	40757847.66
49	4/24/2023 14:33	4/24/2023	2:33:16 PM	40.7	2819754.132
50	4/24/2023 14:37	4/24/2023	2:37:16 PM	32	380374.3662
51	4/24/2023 14:41	4/24/2023	2:41:16 PM	54.2	63126431.81
52	4/24/2023 14:45	4/24/2023	2:45:16 PM	43.3	5131109.015
53	4/24/2023 14:49	4/24/2023	2:49:16 PM	58.3	162259914.1
54	4/24/2023 14:53	4/24/2023	2:53:16 PM	37.6	1381055.85
55	4/24/2023 14:57	4/24/2023	2:57:16 PM	34.8	724788.4129
56	4/24/2023 15:01	4/24/2023	3:01:16 PM	38.5	1699069.883
57	4/24/2023 15:05	4/24/2023	3:05:16 PM	41.7	3549860.132
58	4/24/2023 15:09	4/24/2023	3:09:16 PM	47.8	14461430.07
59	4/24/2023 15:13	4/24/2023	3:13:16 PM	43.6	5498082.367
60	4/24/2023 15:17	4/24/2023	3:17:16 PM	38.3	1622599.141
61	4/24/2023 15:21	4/24/2023	3:21:16 PM	35.6	871387.3314
62	4/24/2023 15:25	4/24/2023	3:25:16 PM	40.7	2819754.132
63	4/24/2023 15:29	4/24/2023	3:29:16 PM	40.4	2631547.671
64	4/24/2023 15:33	4/24/2023	3:33:16 PM	44.8	7247884.129
65	4/24/2023 15:37	4/24/2023	3:37:16 PM	60	240000000
66	4/24/2023 15:41	4/24/2023	3:41:16 PM	36.6	1097011.655
67	4/24/2023 15:45	4/24/2023	3:45:16 PM	38.2	1585664.275
68	4/24/2023 15:49	4/24/2023	3:49:16 PM	52.4	41707219.89
69	4/24/2023 15:53	4/24/2023	3:53:16 PM	60.4	263154767.1
70	4/24/2023 15:57	4/24/2023	3:57:16 PM	46.3	10237908.45
71	4/24/2023 16:01	4/24/2023	4:01:16 PM	61	302142098.8
72	4/24/2023 16:05	4/24/2023	4:05:16 PM	44.7	7082902.144
73	4/24/2023 16:09	4/24/2023	4:09:16 PM	42	3803743.662
74	4/24/2023 16:13	4/24/2023	4:13:16 PM	40.8	2885434.643
75	4/24/2023 16:17	4/24/2023	4:17:16 PM	45.7	8916845.498
76	4/24/2023 16:21	4/24/2023	4:21:16 PM	41.5	3390090.107
77	4/24/2023 16:25	4/24/2023	4:25:16 PM	45.3	8132259.747
78	4/24/2023 16:29	4/24/2023	4:29:16 PM	54.1	61689498.79
79	4/24/2023 16:33	4/24/2023	4:33:16 PM	42.3	4075784.766
80	4/24/2023 16:37	4/24/2023	4:37:16 PM	40.3	2571646.333
81	4/24/2023 16:41	4/24/2023	4:41:16 PM	60.7	281975413.2
82	4/24/2023 16:45	4/24/2023	4:45:16 PM	49.6	21888260.14
83	4/24/2023 16:49	4/24/2023	4:49:16 PM	39.5	2139002.252
84	4/24/2023 16:53	4/24/2023	4:53:16 PM	45.4	8321684.411
85	4/24/2023 16:57	4/24/2023	4:57:16 PM	56.7	112256433.9
86	4/24/2023 17:01	4/24/2023	5:01:16 PM	40.9	2952645.05
87	4/24/2023 17:05	4/24/2023	5:05:16 PM	45.8	9124545.512
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91	4/24/2023 17:21	4/24/2023	5:21:16 PM	53.2	50143107.14
92	4/24/2023 17:25	4/24/2023	5:25:16 PM	39.4	2090312.616
93	4/24/2023 17:29	4/24/2023	5:29:16 PM	37.9	1479828.004
94	4/24/2023 17:33	4/24/2023	5:33:16 PM	42	3803743.662

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106	4/24/2023 18:21	4/24/2023	6:21:16 PM	38.1	1549570.15
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109	4/24/2023 18:33	4/24/2023	6:33:16 PM	34.7	708290.2144
110	4/24/2023 18:37	4/24/2023	6:37:16 PM	39.8	2291982.206
111	4/24/2023 18:41	4/24/2023	6:41:16 PM	37.1	1230867.322
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135	4/24/2023 20:17	4/24/2023	8:17:16 PM	57.7	141322477.3
136	4/24/2023 20:21	4/24/2023	8:21:16 PM	60	240000000
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138	4/24/2023 20:29	4/24/2023	8:29:16 PM	58.5	169906988.3
139	4/24/2023 20:33	4/24/2023	8:33:16 PM	57.7	141322477.3
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142	4/24/2023 20:45	4/24/2023	8:45:16 PM	45.9	9337083.48
143	4/24/2023 20:49	4/24/2023	8:49:16 PM	44.4	6610148.888
144	4/24/2023 20:53	4/24/2023	8:53:16 PM	52	38037436.62
145	4/24/2023 20:57	4/24/2023	8:57:16 PM	57.2	125953790.5
146	4/24/2023 21:01	4/24/2023	9:01:16 PM	61.6	346905545
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152	4/24/2023 21:25	4/24/2023	9:25:16 PM	59.5	213900225.2
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154	4/24/2023 21:33	4/24/2023	9:33:16 PM	56.2	100048652
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156	4/24/2023 21:41	4/24/2023	9:41:16 PM	58	151429762.7
157	4/24/2023 21:45	4/24/2023	9:45:16 PM	59.1	195079323.9
158	4/24/2023 21:49	4/24/2023	9:49:16 PM	54.1	61689498.79
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160	4/24/2023 21:57	4/24/2023	9:57:16 PM	59.3	204273129.2
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163	4/24/2023 22:09	4/24/2023	10:09:16 PM	59.5	213900225.2
164	4/24/2023 22:13	4/24/2023	10:13:16 PM	58.9	186299308
165	4/24/2023 22:17	4/24/2023	10:17:16 PM	58.7	177914457.9
166	4/24/2023 22:21	4/24/2023	10:21:16 PM	58.8	182058618
167	4/24/2023 22:25	4/24/2023	10:25:16 PM	59	190638776.3
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171	4/24/2023 22:41	4/24/2023	10:41:16 PM	58.5	169906988.3
172	4/24/2023 22:45	4/24/2023	10:45:16 PM	59.5	213900225.2
173	4/24/2023 22:49	4/24/2023	10:49:16 PM	60.1	245590318.1
174	4/24/2023 22:53	4/24/2023	10:53:16 PM	43.5	5372930.733
175	4/24/2023 22:57	4/24/2023	10:57:16 PM	55.7	89168454.98
176	4/24/2023 23:01	4/24/2023	11:01:16 PM	59	190638776.3
177	4/24/2023 23:05	4/24/2023	11:05:16 PM	56.5	107204062.1
178	4/24/2023 23:09	4/24/2023	11:09:16 PM	55.6	87138733.14
179	4/24/2023 23:13	4/24/2023	11:13:16 PM	58.6	173864630.4
180	4/24/2023 23:17	4/24/2023	11:17:16 PM	44.1	6168949.879
181	4/24/2023 23:21	4/24/2023	11:21:16 PM	43	4788629.556
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183	4/24/2023 23:29	4/24/2023	11:29:16 PM	58.4	166039433
184	4/24/2023 23:33	4/24/2023	11:33:16 PM	57.7	141322477.3
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186	4/24/2023 23:41	4/24/2023	11:41:16 PM	45.2	7947146.916
187	4/24/2023 23:45	4/24/2023	11:45:16 PM	44.4	6610148.888
188	4/24/2023 23:49	4/24/2023	11:49:16 PM	42.8	4573105.723
189	4/24/2023 23:53	4/24/2023	11:53:16 PM	45.1	7766247.766
190	4/24/2023 23:57	4/24/2023	11:57:16 PM	44.9	7416709.038
191	4/25/2023 0:01	4/25/2023	12:01:16 AM	44.1	6168949.879
192	4/25/2023 0:05	4/25/2023	12:05:16 AM	44.2	6312643.181
193	4/25/2023 0:09	4/25/2023	12:09:16 AM	47.8	14461430.07
194	4/25/2023 0:13	4/25/2023	12:13:16 AM	45.6	8713873.314
195	4/25/2023 0:17	4/25/2023	12:17:16 AM	45.1	7766247.766
196	4/25/2023 0:21	4/25/2023	12:21:16 AM	43.5	5372930.733
197	4/25/2023 0:25	4/25/2023	12:25:16 AM	29	190638.7763
198	4/25/2023 0:29	4/25/2023	12:29:16 AM	31.4	331292.2235
199	4/25/2023 0:33	4/25/2023	12:33:16 AM	45.4	8321684.411
200	4/25/2023 0:37	4/25/2023	12:37:16 AM	45.2	7947146.916
201	4/25/2023 0:41	4/25/2023	12:41:16 AM	40.1	2455903.181
202	4/25/2023 0:45	4/25/2023	12:45:16 AM	33.8	575719.9006
203	4/25/2023 0:49	4/25/2023	12:49:16 AM	32	380374.3662
204	4/25/2023 0:53	4/25/2023	12:53:16 AM	30.9	295264.505

205	4/25/2023 0:57	4/25/2023	12:57:16 AM	30.9	295264.505
206	4/25/2023 1:01	4/25/2023	1:01:16 AM	31.4	331292.2235
207	4/25/2023 1:05	4/25/2023	1:05:16 AM	29.7	223981.0322
208	4/25/2023 1:09	4/25/2023	1:09:16 AM	29	190638.7763
209	4/25/2023 1:13	4/25/2023	1:13:16 AM	29	190638.7763
210	4/25/2023 1:17	4/25/2023	1:17:16 AM	29.5	213900.2252
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213	4/25/2023 1:29	4/25/2023	1:29:16 AM	31.3	323751.0918
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215	4/25/2023 1:37	4/25/2023	1:37:16 AM	28.6	173864.6304
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218	4/25/2023 1:49	4/25/2023	1:49:16 AM	28.5	169906.9883
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220	4/25/2023 1:57	4/25/2023	1:57:16 AM	29.3	204273.1292
221	4/25/2023 2:01	4/25/2023	2:01:16 AM	28.8	182058.618
222	4/25/2023 2:05	4/25/2023	2:05:16 AM	29.1	195079.3239
223	4/25/2023 2:09	4/25/2023	2:09:16 AM	29.8	229198.2206
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225	4/25/2023 2:17	4/25/2023	2:17:16 AM	30.3	257164.6333
226	4/25/2023 2:21	4/25/2023	2:21:16 AM	34.5	676411.9035
227	4/25/2023 2:25	4/25/2023	2:25:16 AM	36.3	1023790.845
228	4/25/2023 2:29	4/25/2023	2:29:16 AM	33.7	562614.9157
229	4/25/2023 2:33	4/25/2023	2:33:16 AM	39.5	2139002.252
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232	4/25/2023 2:45	4/25/2023	2:45:16 AM	36.9	1175469.166
233	4/25/2023 2:49	4/25/2023	2:49:16 AM	31.8	363254.6996
234	4/25/2023 2:53	4/25/2023	2:53:16 AM	34.2	631264.3181
235	4/25/2023 2:57	4/25/2023	2:57:16 AM	33.9	589130.1398
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239	4/25/2023 3:13	4/25/2023	3:13:16 AM	29	190638.7763
240	4/25/2023 3:17	4/25/2023	3:17:16 AM	33.4	525062.7897
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242	4/25/2023 3:25	4/25/2023	3:25:16 AM	32.3	407578.4766
243	4/25/2023 3:29	4/25/2023	3:29:16 AM	29.6	218882.6014
244	4/25/2023 3:33	4/25/2023	3:33:16 AM	31.6	346905.545
245	4/25/2023 3:37	4/25/2023	3:37:16 AM	32.5	426787.0584
246	4/25/2023 3:41	4/25/2023	3:41:16 AM	32.3	407578.4766
247	4/25/2023 3:45	4/25/2023	3:45:16 AM	33	478862.9556
248	4/25/2023 3:49	4/25/2023	3:49:16 AM	30.3	257164.6333
249	4/25/2023 3:53	4/25/2023	3:53:16 AM	36.9	1175469.166
250	4/25/2023 3:57	4/25/2023	3:57:16 AM	35.2	794714.6916
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253	4/25/2023 4:09	4/25/2023	4:09:16 AM	34.8	724788.4129
254	4/25/2023 4:13	4/25/2023	4:13:16 AM	35.2	794714.6916
255	4/25/2023 4:17	4/25/2023	4:17:16 AM	34.5	676411.9035
256	4/25/2023 4:21	4/25/2023	4:21:16 AM	37.9	1479828.004
257	4/25/2023 4:25	4/25/2023	4:25:16 AM	31.7	354986.0132
258	4/25/2023 4:29	4/25/2023	4:29:16 AM	61	302142098.8
259	4/25/2023 4:33	4/25/2023	4:33:16 AM	33.8	575719.9006

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261	4/25/2023 4:41	4/25/2023	4:41:16 AM	34.7	708290.2144
262	4/25/2023 4:45	4/25/2023	4:45:16 AM	47.8	14461430.07
263	4/25/2023 4:49	4/25/2023	4:49:16 AM	56.9	117546916.6
264	4/25/2023 4:53	4/25/2023	4:53:16 AM	50.5	26928442.9
265	4/25/2023 4:57	4/25/2023	4:57:16 AM	41.3	3237510.918
266	4/25/2023 5:01	4/25/2023	5:01:16 AM	41.5	3390090.107
267	4/25/2023 5:05	4/25/2023	5:05:16 AM	47.8	14461430.07
268	4/25/2023 5:09	4/25/2023	5:09:16 AM	43.1	4900171.067
269	4/25/2023 5:13	4/25/2023	5:13:16 AM	38.8	1820586.18
270	4/25/2023 5:17	4/25/2023	5:17:16 AM	38.1	1549570.15
271	4/25/2023 5:21	4/25/2023	5:21:16 AM	55.3	81322597.47
272	4/25/2023 5:25	4/25/2023	5:25:16 AM	56	95545720.93
273	4/25/2023 5:29	4/25/2023	5:29:16 AM	39.8	2291982.206
274	4/25/2023 5:33	4/25/2023	5:33:16 AM	58.1	154957015
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277	4/25/2023 5:45	4/25/2023	5:45:16 AM	55.1	77662477.66
278	4/25/2023 5:49	4/25/2023	5:49:16 AM	44.8	7247884.129
279	4/25/2023 5:53	4/25/2023	5:53:16 AM	42.5	4267870.584
280	4/25/2023 5:57	4/25/2023	5:57:16 AM	47.3	12888763.11
281	4/25/2023 6:01	4/25/2023	6:01:16 AM	43.1	4900171.067
282	4/25/2023 6:05	4/25/2023	6:05:16 AM	45.5	8515521.342
283	4/25/2023 6:09	4/25/2023	6:09:16 AM	52.4	41707219.89
284	4/25/2023 6:13	4/25/2023	6:13:16 AM	52.1	38923442.34
285	4/25/2023 6:17	4/25/2023	6:17:16 AM	45.9	9337083.48
286	4/25/2023 6:21	4/25/2023	6:21:16 AM	37.6	1381055.85
287	4/25/2023 6:25	4/25/2023	6:25:16 AM	64.9	741670903.8
288	4/25/2023 6:29	4/25/2023	6:29:16 AM	42.3	4075784.766
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291	4/25/2023 6:41	4/25/2023	6:41:16 AM	49.1	19507932.39
292	4/25/2023 6:45	4/25/2023	6:45:16 AM	65.1	776624776.6
293	4/25/2023 6:49	4/25/2023	6:49:16 AM	49.6	21888260.14
294	4/25/2023 6:53	4/25/2023	6:53:16 AM	39.1	1950793.239
295	4/25/2023 6:57	4/25/2023	6:57:16 AM	45.9	9337083.48
296	4/25/2023 7:01	4/25/2023	7:01:16 AM	38.1	1549570.15
297	4/25/2023 7:05	4/25/2023	7:05:16 AM	35.3	813225.9747
298	4/25/2023 7:09	4/25/2023	7:09:16 AM	38.7	1779144.579
299	4/25/2023 7:13	4/25/2023	7:13:16 AM	38.7	1779144.579
300	4/25/2023 7:17	4/25/2023	7:17:16 AM	39.9	2345369.33
301	4/25/2023 7:21	4/25/2023	7:21:16 AM	45.9	9337083.48
302	4/25/2023 7:25	4/25/2023	7:25:16 AM	44.6	6921675.608
303	4/25/2023 7:29	4/25/2023	7:29:16 AM	36.5	1072040.621
304	4/25/2023 7:33	4/25/2023	7:33:16 AM	37.7	1413224.773
305	4/25/2023 7:37	4/25/2023	7:37:16 AM	42.8	4573105.723
306	4/25/2023 7:41	4/25/2023	7:41:16 AM	35.9	933708.348
307	4/25/2023 7:45	4/25/2023	7:45:16 AM	35.5	851552.1342
308	4/25/2023 7:49	4/25/2023	7:49:16 AM	40.9	2952645.05
309	4/25/2023 7:53	4/25/2023	7:53:16 AM	42.6	4367282.061
310	4/25/2023 7:57	4/25/2023	7:57:16 AM	35.2	794714.6916
311	4/25/2023 8:01	4/25/2023	8:01:16 AM	46.5	10720406.21
312	4/25/2023 8:05	4/25/2023	8:05:16 AM	40.3	2571646.333
313	4/25/2023 8:09	4/25/2023	8:09:16 AM	48.7	17791445.79
314	4/25/2023 8:13	4/25/2023	8:13:16 AM	51.2	31638161.73

315	4/25/2023 8:17	4/25/2023	8:17:16 AM	40.4	2631547.671
316	4/25/2023 8:21	4/25/2023	8:21:16 AM	43.9	5891301.398
317	4/25/2023 8:25	4/25/2023	8:25:16 AM	44.3	6459683.529
318	4/25/2023 8:29	4/25/2023	8:29:16 AM	47	12028493.61
319	4/25/2023 8:33	4/25/2023	8:33:16 AM	46.8	11487122.22
320	4/25/2023 8:37	4/25/2023	8:37:16 AM	50.7	28197541.32
321	4/25/2023 8:41	4/25/2023	8:41:16 AM	46.9	11754691.66
322	4/25/2023 8:45	4/25/2023	8:45:16 AM	43.4	5250627.897
323	4/25/2023 8:49	4/25/2023	8:49:16 AM	50.3	25716463.33
324	4/25/2023 8:53	4/25/2023	8:53:16 AM	64.9	741670903.8
325	4/25/2023 8:57	4/25/2023	8:57:16 AM	46.3	10237908.45
326	4/25/2023 9:01	4/25/2023	9:01:16 AM	46.8	11487122.22
327	4/25/2023 9:05	4/25/2023	9:05:16 AM	54.8	72478841.29
328	4/25/2023 9:09	4/25/2023	9:09:16 AM	51.1	30917989.24
329	4/25/2023 9:13	4/25/2023	9:13:16 AM	53.9	58913013.98
330	4/25/2023 9:17	4/25/2023	9:17:16 AM	47.8	14461430.07
331	4/25/2023 9:21	4/25/2023	9:21:16 AM	53.1	49001710.67
332	4/25/2023 9:25	4/25/2023	9:25:16 AM	52.5	42678705.84
333	4/25/2023 9:29	4/25/2023	9:29:16 AM	47.6	13810558.5
334	4/25/2023 9:33	4/25/2023	9:33:16 AM	57.2	125953790.5
335	4/25/2023 9:37	4/25/2023	9:37:16 AM	57	120284936.1
336	4/25/2023 9:41	4/25/2023	9:41:16 AM	57.6	138105585
337	4/25/2023 9:45	4/25/2023	9:45:16 AM	44.7	7082902.144
338	4/25/2023 9:49	4/25/2023	9:49:16 AM	52.9	46796270.39
339	4/25/2023 9:53	4/25/2023	9:53:16 AM	51.6	34690554.5
340	4/25/2023 9:57	4/25/2023	9:57:16 AM	43.3	5131109.015
341	4/25/2023 10:01	4/25/2023	10:01:16 AM	52.6	43672820.61
342	4/25/2023 10:05	4/25/2023	10:05:16 AM	61.3	323751091.8
343	4/25/2023 10:09	4/25/2023	10:09:16 AM	41.4	3312922.235
344	4/25/2023 10:13	4/25/2023	10:13:16 AM	49.4	20903126.16
345	4/25/2023 10:17	4/25/2023	10:17:16 AM	52.6	43672820.61
346	4/25/2023 10:21	4/25/2023	10:21:16 AM	46.7	11225643.39
347	4/25/2023 10:25	4/25/2023	10:25:16 AM	52	38037436.62
348	4/25/2023 10:29	4/25/2023	10:29:16 AM	51.6	34690554.5
349	4/25/2023 10:33	4/25/2023	10:33:16 AM	37.7	1413224.773
350	4/25/2023 10:37	4/25/2023	10:37:16 AM	57.3	128887631.1
351	4/25/2023 10:41	4/25/2023	10:41:16 AM	56.9	117546916.6
352	4/25/2023 10:45	4/25/2023	10:45:16 AM	49.3	20427312.92
353	4/25/2023 10:49	4/25/2023	10:49:16 AM	52.9	46796270.39
354	4/25/2023 10:53	4/25/2023	10:53:16 AM	53.8	57571990.06
355	4/25/2023 10:57	4/25/2023	10:57:16 AM	58.6	173864630.4
356	4/25/2023 11:01	4/25/2023	11:01:16 AM	47.4	13188980.97
357	4/25/2023 11:05	4/25/2023	11:05:16 AM	49.6	21888260.14
358	4/25/2023 11:09	4/25/2023	11:09:16 AM	41	3021420.988
359	4/25/2023 11:13	4/25/2023	11:13:16 AM	49.8	22919822.06
360	4/25/2023 11:17	4/25/2023	11:17:16 AM	43.4	5250627.897

Projects Site Noise Monitoring Results – Long Term

	dBA L_{eq}	Sample Time	dBA L_{eq}
LT1 – Southwestern Portion of Project Site, May 3 – 4, 2022			
5:35 p.m.	49	5:35 a.m.	52
6:35 p.m.	52	6:35 a.m.	39
7:35 p.m.	54	7:35 a.m.	30
8:35 p.m.	49	8:35 a.m.	35
9:35 p.m.	54	9:35 a.m.	34
10:35 p.m.	52	10:35 a.m.	51
11:35 p.m.	66	11:35 a.m.	57
12:35 a.m.	45	12:35 p.m.	57
1:35 a.m.	58	1:35 p.m.	44
2:35 a.m.	59	2:35 p.m.	55
3:35 a.m.	58	3:35 p.m.	55
4:35 a.m.	58	4:35 p.m.	53
			0

No.s	Date Time	dB
1	4/24/2023 11:21	55.4
2	4/24/2023 11:25	54.4
3	4/24/2023 11:29	52.7
4	4/24/2023 11:33	41
5	4/24/2023 11:37	39.8
6	4/24/2023 11:41	40
7	4/24/2023 11:45	32.9
8	4/24/2023 11:49	32.1
9	4/24/2023 11:53	35
10	4/24/2023 11:57	52.4
11	4/24/2023 12:01	41.7
12	4/24/2023 12:05	45.9
13	4/24/2023 12:09	45.8
14	4/24/2023 12:13	48.4
15	4/24/2023 12:17	32.1
16	4/24/2023 12:21	53.4
17	4/24/2023 12:25	49.3
18	4/24/2023 12:29	49.9
19	4/24/2023 12:33	36.7
20	4/24/2023 12:37	47.9
21	4/24/2023 12:41	45.5
22	4/24/2023 12:45	50.8
23	4/24/2023 12:49	45.6
24	4/24/2023 12:53	48.9
25	4/24/2023 12:57	45.3
26	4/24/2023 13:01	55.1
27	4/24/2023 13:05	47.7
28	4/24/2023 13:09	51.9
29	4/24/2023 13:13	60.4
30	4/24/2023 13:17	43
31	4/24/2023 13:21	55.8
32	4/24/2023 13:25	44.6

33	4/24/2023 13:29	42.3
34	4/24/2023 13:33	42.8
35	4/24/2023 13:37	55
36	4/24/2023 13:41	45.2
37	4/24/2023 13:45	43
38	4/24/2023 13:49	59.2
39	4/24/2023 13:53	47.2
40	4/24/2023 13:57	50.6
41	4/24/2023 14:01	34.4
42	4/24/2023 14:05	61.6
43	4/24/2023 14:09	51.4
44	4/24/2023 14:13	46.1
45	4/24/2023 14:17	42.2
46	4/24/2023 14:21	35.3
47	4/24/2023 14:25	45.6
48	4/24/2023 14:29	52.3
49	4/24/2023 14:33	40.7
50	4/24/2023 14:37	32
51	4/24/2023 14:41	54.2
52	4/24/2023 14:45	43.3
53	4/24/2023 14:49	58.3
54	4/24/2023 14:53	37.6
55	4/24/2023 14:57	34.8
56	4/24/2023 15:01	38.5
57	4/24/2023 15:05	41.7
58	4/24/2023 15:09	47.8
59	4/24/2023 15:13	43.6
60	4/24/2023 15:17	38.3
61	4/24/2023 15:21	35.6
62	4/24/2023 15:25	40.7
63	4/24/2023 15:29	40.4
64	4/24/2023 15:33	44.8
65	4/24/2023 15:37	60
66	4/24/2023 15:41	36.6
67	4/24/2023 15:45	38.2
68	4/24/2023 15:49	52.4
69	4/24/2023 15:53	60.4
70	4/24/2023 15:57	46.3
71	4/24/2023 16:01	61
72	4/24/2023 16:05	44.7
73	4/24/2023 16:09	42
74	4/24/2023 16:13	40.8
75	4/24/2023 16:17	45.7
76	4/24/2023 16:21	41.5
77	4/24/2023 16:25	45.3
78	4/24/2023 16:29	54.1
79	4/24/2023 16:33	42.3

80	4/24/2023 16:37	40.3
81	4/24/2023 16:41	60.7
82	4/24/2023 16:45	49.6
83	4/24/2023 16:49	39.5
84	4/24/2023 16:53	45.4
85	4/24/2023 16:57	56.7
86	4/24/2023 17:01	40.9
87	4/24/2023 17:05	45.8
88	4/24/2023 17:09	44.1
89	4/24/2023 17:13	46.3
90	4/24/2023 17:17	50
91	4/24/2023 17:21	53.2
92	4/24/2023 17:25	39.4
93	4/24/2023 17:29	37.9
94	4/24/2023 17:33	42
95	4/24/2023 17:37	42.9
96	4/24/2023 17:41	49.9
97	4/24/2023 17:45	46.4
98	4/24/2023 17:49	76.4
99	4/24/2023 17:53	42.1
100	4/24/2023 17:57	37.6
101	4/24/2023 18:01	48.4
102	4/24/2023 18:05	36
103	4/24/2023 18:09	39.9
104	4/24/2023 18:13	72.2
105	4/24/2023 18:17	36.5
106	4/24/2023 18:21	38.1
107	4/24/2023 18:25	36.7
108	4/24/2023 18:29	35.5
109	4/24/2023 18:33	34.7
110	4/24/2023 18:37	39.8
111	4/24/2023 18:41	37.1
112	4/24/2023 18:45	52.4
113	4/24/2023 18:49	34.1
114	4/24/2023 18:53	36.3
115	4/24/2023 18:57	37.3
116	4/24/2023 19:01	36.7
117	4/24/2023 19:05	51
118	4/24/2023 19:09	45
119	4/24/2023 19:13	46.7
120	4/24/2023 19:17	44.1
121	4/24/2023 19:21	58.8
122	4/24/2023 19:25	51.3
123	4/24/2023 19:29	55.7
124	4/24/2023 19:33	59.7
125	4/24/2023 19:37	59.6
126	4/24/2023 19:41	60

127	4/24/2023 19:45	53.3
128	4/24/2023 19:49	55.6
129	4/24/2023 19:53	55.4
130	4/24/2023 19:57	59.2
131	4/24/2023 20:01	58.8
132	4/24/2023 20:05	58.8
133	4/24/2023 20:09	54.3
134	4/24/2023 20:13	54.2
135	4/24/2023 20:17	57.7
136	4/24/2023 20:21	60
137	4/24/2023 20:25	59.7
138	4/24/2023 20:29	58.5
139	4/24/2023 20:33	57.7
140	4/24/2023 20:37	58.8
141	4/24/2023 20:41	57
142	4/24/2023 20:45	45.9
143	4/24/2023 20:49	44.4
144	4/24/2023 20:53	52
145	4/24/2023 20:57	57.2
146	4/24/2023 21:01	61.6
147	4/24/2023 21:05	61.7
148	4/24/2023 21:09	61.4
149	4/24/2023 21:13	62
150	4/24/2023 21:17	62.8
151	4/24/2023 21:21	59.6
152	4/24/2023 21:25	59.5
153	4/24/2023 21:29	44.3
154	4/24/2023 21:33	56.2
155	4/24/2023 21:37	57.7
156	4/24/2023 21:41	58
157	4/24/2023 21:45	59.1
158	4/24/2023 21:49	54.1
159	4/24/2023 21:53	58.9
160	4/24/2023 21:57	59.3
161	4/24/2023 22:01	58.6
162	4/24/2023 22:05	59.4
163	4/24/2023 22:09	59.5
164	4/24/2023 22:13	58.9
165	4/24/2023 22:17	58.7
166	4/24/2023 22:21	58.8
167	4/24/2023 22:25	59
168	4/24/2023 22:29	60.6
169	4/24/2023 22:33	58.3
170	4/24/2023 22:37	57.7
171	4/24/2023 22:41	58.5
172	4/24/2023 22:45	59.5
173	4/24/2023 22:49	60.1

174	4/24/2023 22:53	43.5
175	4/24/2023 22:57	55.7
176	4/24/2023 23:01	59
177	4/24/2023 23:05	56.5
178	4/24/2023 23:09	55.6
179	4/24/2023 23:13	58.6
180	4/24/2023 23:17	44.1
181	4/24/2023 23:21	43
182	4/24/2023 23:25	44.7
183	4/24/2023 23:29	58.4
184	4/24/2023 23:33	57.7
185	4/24/2023 23:37	57.6
186	4/24/2023 23:41	45.2
187	4/24/2023 23:45	44.4
188	4/24/2023 23:49	42.8
189	4/24/2023 23:53	45.1
190	4/24/2023 23:57	44.9
191	4/25/2023 0:01	44.1
192	4/25/2023 0:05	44.2
193	4/25/2023 0:09	47.8
194	4/25/2023 0:13	45.6
195	4/25/2023 0:17	45.1
196	4/25/2023 0:21	43.5
197	4/25/2023 0:25	29
198	4/25/2023 0:29	31.4
199	4/25/2023 0:33	45.4
200	4/25/2023 0:37	45.2
201	4/25/2023 0:41	40.1
202	4/25/2023 0:45	33.8
203	4/25/2023 0:49	32
204	4/25/2023 0:53	30.9
205	4/25/2023 0:57	30.9
206	4/25/2023 1:01	31.4
207	4/25/2023 1:05	29.7
208	4/25/2023 1:09	29
209	4/25/2023 1:13	29
210	4/25/2023 1:17	29.5
211	4/25/2023 1:21	28.6
212	4/25/2023 1:25	28.9
213	4/25/2023 1:29	31.3
214	4/25/2023 1:33	29.2
215	4/25/2023 1:37	28.6
216	4/25/2023 1:41	32.5
217	4/25/2023 1:45	28.7
218	4/25/2023 1:49	28.5
219	4/25/2023 1:53	29.1
220	4/25/2023 1:57	29.3

221	4/25/2023 2:01	28.8
222	4/25/2023 2:05	29.1
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233	4/25/2023 2:49	31.8
234	4/25/2023 2:53	34.2
235	4/25/2023 2:57	33.9
236	4/25/2023 3:01	30.8
237	4/25/2023 3:05	33.3
238	4/25/2023 3:09	29.7
239	4/25/2023 3:13	29
240	4/25/2023 3:17	33.4
241	4/25/2023 3:21	37.1
242	4/25/2023 3:25	32.3
243	4/25/2023 3:29	29.6
244	4/25/2023 3:33	31.6
245	4/25/2023 3:37	32.5
246	4/25/2023 3:41	32.3
247	4/25/2023 3:45	33
248	4/25/2023 3:49	30.3
249	4/25/2023 3:53	36.9
250	4/25/2023 3:57	35.2
251	4/25/2023 4:01	32.8
252	4/25/2023 4:05	30.2
253	4/25/2023 4:09	34.8
254	4/25/2023 4:13	35.2
255	4/25/2023 4:17	34.5
256	4/25/2023 4:21	37.9
257	4/25/2023 4:25	31.7
258	4/25/2023 4:29	61
259	4/25/2023 4:33	33.8
260	4/25/2023 4:37	39.1
261	4/25/2023 4:41	34.7
262	4/25/2023 4:45	47.8
263	4/25/2023 4:49	56.9
264	4/25/2023 4:53	50.5
265	4/25/2023 4:57	41.3
266	4/25/2023 5:01	41.5
267	4/25/2023 5:05	47.8

268	4/25/2023 5:09	43.1
269	4/25/2023 5:13	38.8
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272	4/25/2023 5:25	56
273	4/25/2023 5:29	39.8
274	4/25/2023 5:33	58.1
275	4/25/2023 5:37	47.5
276	4/25/2023 5:41	66.8
277	4/25/2023 5:45	55.1
278	4/25/2023 5:49	44.8
279	4/25/2023 5:53	42.5
280	4/25/2023 5:57	47.3
281	4/25/2023 6:01	43.1
282	4/25/2023 6:05	45.5
283	4/25/2023 6:09	52.4
284	4/25/2023 6:13	52.1
285	4/25/2023 6:17	45.9
286	4/25/2023 6:21	37.6
287	4/25/2023 6:25	64.9
288	4/25/2023 6:29	42.3
289	4/25/2023 6:33	56.8
290	4/25/2023 6:37	53.9
291	4/25/2023 6:41	49.1
292	4/25/2023 6:45	65.1
293	4/25/2023 6:49	49.6
294	4/25/2023 6:53	39.1
295	4/25/2023 6:57	45.9
296	4/25/2023 7:01	38.1
297	4/25/2023 7:05	35.3
298	4/25/2023 7:09	38.7
299	4/25/2023 7:13	38.7
300	4/25/2023 7:17	39.9
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304	4/25/2023 7:33	37.7
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315	4/25/2023 8:17	40.4
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322	4/25/2023 8:45	43.4
323	4/25/2023 8:49	50.3
324	4/25/2023 8:53	64.9
325	4/25/2023 8:57	46.3
326	4/25/2023 9:01	46.8
327	4/25/2023 9:05	54.8
328	4/25/2023 9:09	51.1
329	4/25/2023 9:13	53.9
330	4/25/2023 9:17	47.8
331	4/25/2023 9:21	53.1
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333	4/25/2023 9:29	47.6
334	4/25/2023 9:33	57.2
335	4/25/2023 9:37	57
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337	4/25/2023 9:45	44.7
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341	4/25/2023 10:01	52.6
342	4/25/2023 10:05	61.3
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344	4/25/2023 10:13	49.4
345	4/25/2023 10:17	52.6
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347	4/25/2023 10:25	52
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351	4/25/2023 10:41	56.9
352	4/25/2023 10:45	49.3
353	4/25/2023 10:49	52.9
354	4/25/2023 10:53	53.8
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356	4/25/2023 11:01	47.4
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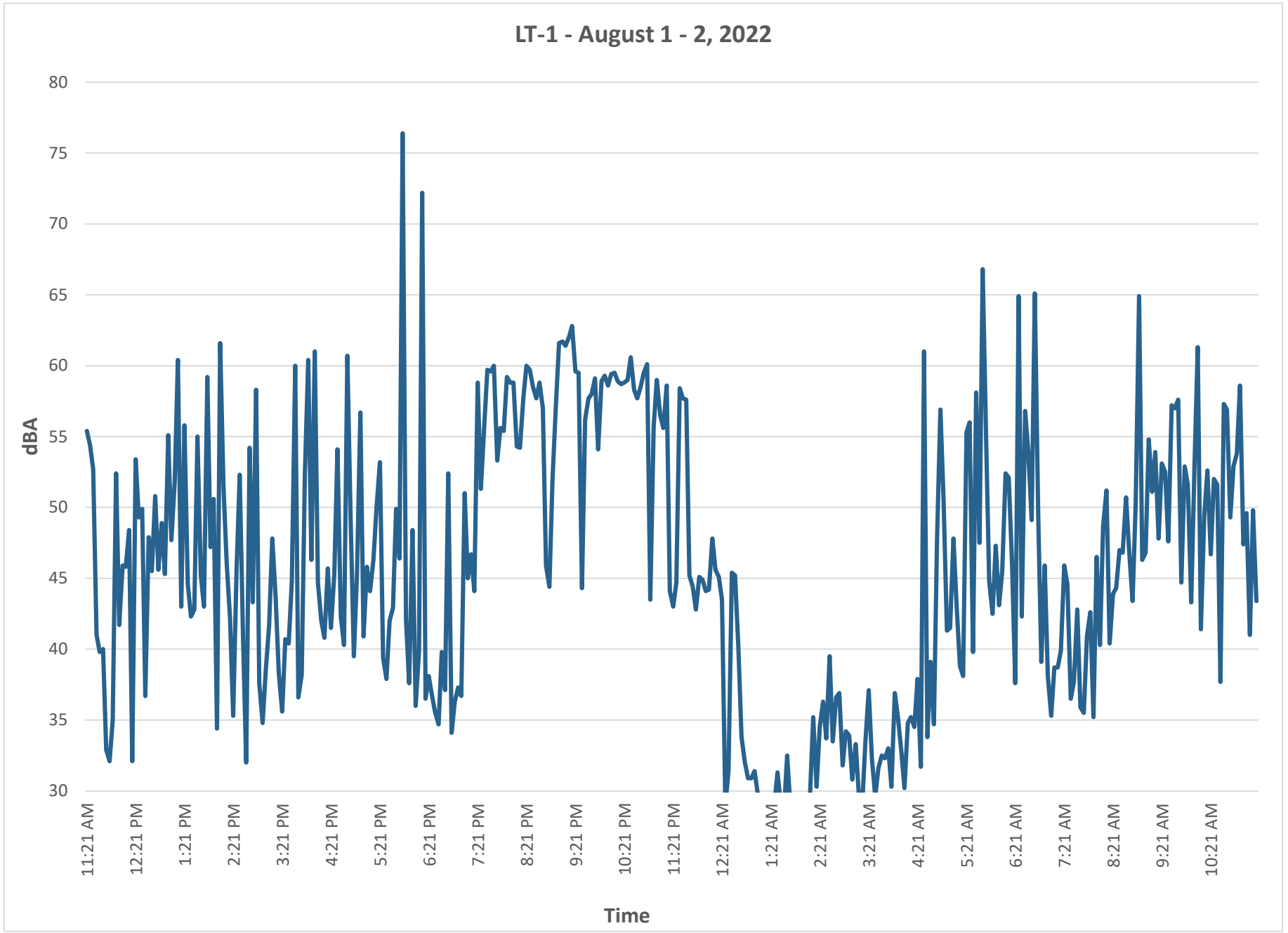
359	4/25/2023 11:13	49.8
360	4/25/2023 11:17	43.4


LT-1 - August 1 - 2, 2022
80
75
70
65
60
55
50
45
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35
30
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10:21 AM
Time

Data Logger 2
SET 240
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L10 59.1
L50 45.6
L90 32.1
L95 29.6
Max dB 89.7
############
SEL 119.3
Leq 70.0

No.s	Date Time	dB
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6	4/24/2023 11:41	40
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8	4/24/2023 11:49	32.1
9	4/24/2023 11:53	35
10	4/24/2023 11:57	52.4
11	4/24/2023 12:01	41.7
12	4/24/2023 12:05	45.9
13	4/24/2023 12:09	45.8
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25	4/24/2023 12:57	45.3
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28	4/24/2023 13:09	51.9
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41	4/24/2023 14:01	34.4
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164	4/24/2023 22:13	58.9
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173	4/24/2023 22:49	60.1

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175	4/24/2023 22:57	55.7
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180	4/24/2023 23:17	44.1
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183	4/24/2023 23:29	58.4
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187	4/24/2023 23:45	44.4
188	4/24/2023 23:49	42.8
189	4/24/2023 23:53	45.1
190	4/24/2023 23:57	44.9
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243	4/25/2023 3:29	29.6
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292	4/25/2023 6:45	65.1
293	4/25/2023 6:49	49.6
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310	4/25/2023 7:57	35.2
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360	4/25/2023 11:17	43.4

Data Logger 2
SET 3
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Range 30-90
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L10 48.1
L50 38.1
L90 33.4
L95 32.9
Max dB 84.1
4/25/2023 12:39
SEL 92.8
Leq 63.3

No.s	Date Time	dB
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6	4/25/2023 12:38	44.5
7	4/25/2023 12:38	43
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10	4/25/2023 12:38	47.2
11	4/25/2023 12:38	46.4
12	4/25/2023 12:38	46.1
13	4/25/2023 12:38	45.8
14	4/25/2023 12:38	46.2
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57	4/25/2023 12:40	41.1
58	4/25/2023 12:40	38.3
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Data Logger 2
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SLOW
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L10 50.5
L50 44.0
L90 35.3
L95 33.9
Max dB 54.6
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SEL 75.9
Leq 46.4

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240	4/25/2023 13:17	42.8
241	4/25/2023 13:17	48.8
242	4/25/2023 13:17	53.4
243	4/25/2023 13:17	51.1
244	4/25/2023 13:17	50.9
245	4/25/2023 13:17	50.3
246	4/25/2023 13:17	50.1
247	4/25/2023 13:17	52.4
248	4/25/2023 13:17	53.7
249	4/25/2023 13:17	51.5
250	4/25/2023 13:17	51.7
251	4/25/2023 13:17	51
252	4/25/2023 13:17	51.3
253	4/25/2023 13:17	54.2
254	4/25/2023 13:17	52.5
255	4/25/2023 13:18	48.6
256	4/25/2023 13:18	50.7
257	4/25/2023 13:18	47.7
258	4/25/2023 13:18	49.7
259	4/25/2023 13:18	50.1
260	4/25/2023 13:18	51.7
261	4/25/2023 13:18	49.8
262	4/25/2023 13:18	48.4
263	4/25/2023 13:18	45.6
264	4/25/2023 13:18	44.3
265	4/25/2023 13:18	47.5
266	4/25/2023 13:18	42.7
267	4/25/2023 13:18	45.5

268	4/25/2023 13:18	44.9
269	4/25/2023 13:18	46.8
270	4/25/2023 13:18	47.5
271	4/25/2023 13:18	44.4
272	4/25/2023 13:18	40.3
273	4/25/2023 13:18	42.6
274	4/25/2023 13:18	43.8
275	4/25/2023 13:19	41.9
276	4/25/2023 13:19	43.9
277	4/25/2023 13:19	44.5
278	4/25/2023 13:19	43.3
279	4/25/2023 13:19	42.8
280	4/25/2023 13:19	41.5
281	4/25/2023 13:19	42.5
282	4/25/2023 13:19	47
283	4/25/2023 13:19	45.4
284	4/25/2023 13:19	45.6
285	4/25/2023 13:19	47
286	4/25/2023 13:19	44.7
287	4/25/2023 13:19	47.2
288	4/25/2023 13:19	42.4
289	4/25/2023 13:19	41.1
290	4/25/2023 13:19	41
291	4/25/2023 13:19	38.9
292	4/25/2023 13:19	39.1
293	4/25/2023 13:19	42.9
294	4/25/2023 13:19	44.9
295	4/25/2023 13:20	47.2
296	4/25/2023 13:20	44.7
297	4/25/2023 13:20	43.2
298	4/25/2023 13:20	42.9
299	4/25/2023 13:20	40.5
300	4/25/2023 13:20	41.9

Data Logger 2
SET 3
A
SLOW
Range 30-90
L05 44.5
L10 42.0
L50 36.5
L90 33.1
L95 32.7
Max dB 77.7
4/25/2023 13:49
SEL 82.8
Leq 53.3

No.s	Date Time	dB
1	4/25/2023 13:43	38.6
2	4/25/2023 13:43	41.6
3	4/25/2023 13:43	39.7
4	4/25/2023 13:43	38.9
5	4/25/2023 13:43	37.6
6	4/25/2023 13:43	35.9
7	4/25/2023 13:43	37.5
8	4/25/2023 13:43	38.6
9	4/25/2023 13:43	35.2
10	4/25/2023 13:43	34.6
11	4/25/2023 13:43	35.4
12	4/25/2023 13:43	35.7
13	4/25/2023 13:43	35.9
14	4/25/2023 13:43	36.3
15	4/25/2023 13:43	36.7
16	4/25/2023 13:43	38.1
17	4/25/2023 13:43	38.8
18	4/25/2023 13:43	39.7
19	4/25/2023 13:44	40.2
20	4/25/2023 13:44	38.5
21	4/25/2023 13:44	42.2
22	4/25/2023 13:44	43.9
23	4/25/2023 13:44	40.1
24	4/25/2023 13:44	41.7
25	4/25/2023 13:44	40.6
26	4/25/2023 13:44	40.7
27	4/25/2023 13:44	46.7
28	4/25/2023 13:44	49.4
29	4/25/2023 13:44	52.8
30	4/25/2023 13:44	51.2
31	4/25/2023 13:44	42.2
32	4/25/2023 13:44	38.3

33	4/25/2023 13:44	36.6
34	4/25/2023 13:44	35.5
35	4/25/2023 13:44	36.9
36	4/25/2023 13:44	35.1
37	4/25/2023 13:44	41.3
38	4/25/2023 13:44	43.8
39	4/25/2023 13:45	37.1
40	4/25/2023 13:45	36
41	4/25/2023 13:45	36.7
42	4/25/2023 13:45	37.2
43	4/25/2023 13:45	42.7
44	4/25/2023 13:45	40.5
45	4/25/2023 13:45	42.8
46	4/25/2023 13:45	38.2
47	4/25/2023 13:45	46.2
48	4/25/2023 13:45	44.6
49	4/25/2023 13:45	40.1
50	4/25/2023 13:45	37.9
51	4/25/2023 13:45	37
52	4/25/2023 13:45	36.7
53	4/25/2023 13:45	34.6
54	4/25/2023 13:45	33.9
55	4/25/2023 13:45	33.4
56	4/25/2023 13:45	32.8
57	4/25/2023 13:45	32.7
58	4/25/2023 13:45	32.3
59	4/25/2023 13:46	33.1
60	4/25/2023 13:46	32.8
61	4/25/2023 13:46	33.4
62	4/25/2023 13:46	35.8
63	4/25/2023 13:46	33.3
64	4/25/2023 13:46	33.4
65	4/25/2023 13:46	32.8
66	4/25/2023 13:46	33.4
67	4/25/2023 13:46	32.7
68	4/25/2023 13:46	33.5
69	4/25/2023 13:46	34.4
70	4/25/2023 13:46	33.1
71	4/25/2023 13:46	32.6
72	4/25/2023 13:46	32.6
73	4/25/2023 13:46	32.8
74	4/25/2023 13:46	32.5
75	4/25/2023 13:46	34.3
76	4/25/2023 13:46	34.1
77	4/25/2023 13:46	34.2
78	4/25/2023 13:46	34.9
79	4/25/2023 13:47	33

80	4/25/2023 13:47	32.7
81	4/25/2023 13:47	32.2
82	4/25/2023 13:47	32.7
83	4/25/2023 13:47	32.4
84	4/25/2023 13:47	33.5
85	4/25/2023 13:47	34.5
86	4/25/2023 13:47	33.6
87	4/25/2023 13:47	38.7
88	4/25/2023 13:47	42
89	4/25/2023 13:47	36.2
90	4/25/2023 13:47	33.4
91	4/25/2023 13:47	33.1
92	4/25/2023 13:47	35.8
93	4/25/2023 13:47	39.4
94	4/25/2023 13:47	37.6
95	4/25/2023 13:47	40.9
96	4/25/2023 13:47	40.1
97	4/25/2023 13:47	37.2
98	4/25/2023 13:47	35.2
99	4/25/2023 13:48	35.9
100	4/25/2023 13:48	35.1
101	4/25/2023 13:48	35.7
102	4/25/2023 13:48	36.4
103	4/25/2023 13:48	36.1
104	4/25/2023 13:48	35.5
105	4/25/2023 13:48	35.9
106	4/25/2023 13:48	37.8
107	4/25/2023 13:48	38.5
108	4/25/2023 13:48	38
109	4/25/2023 13:48	37.5
110	4/25/2023 13:48	37
111	4/25/2023 13:48	36.6
112	4/25/2023 13:48	37.2
113	4/25/2023 13:48	40.1
114	4/25/2023 13:48	39.3
115	4/25/2023 13:48	41.8
116	4/25/2023 13:48	41.7
117	4/25/2023 13:48	42.6
118	4/25/2023 13:48	39.6
119	4/25/2023 13:49	39.4
120	4/25/2023 13:49	41.1
121	4/25/2023 13:49	42.2
122	4/25/2023 13:49	44.2
123	4/25/2023 13:49	46.3
124	4/25/2023 13:49	51.6
125	4/25/2023 13:49	58.2
126	4/25/2023 13:49	65.8

127	4/25/2023 13:49	76.7
128	4/25/2023 13:49	68.3
129	4/25/2023 13:49	60
130	4/25/2023 13:49	56.3
131	4/25/2023 13:49	52.3
132	4/25/2023 13:49	47.1
133	4/25/2023 13:49	40.8
134	4/25/2023 13:49	36.7
135	4/25/2023 13:49	36
136	4/25/2023 13:49	35.8
137	4/25/2023 13:49	34.2
138	4/25/2023 13:49	35.5
139	4/25/2023 13:50	35.4
140	4/25/2023 13:50	36.7
141	4/25/2023 13:50	36.7
142	4/25/2023 13:50	34.5
143	4/25/2023 13:50	34.2
144	4/25/2023 13:50	35.7
145	4/25/2023 13:50	34.8
146	4/25/2023 13:50	34.7
147	4/25/2023 13:50	33.6
148	4/25/2023 13:50	33
149	4/25/2023 13:50	34.5
150	4/25/2023 13:50	33.7
151	4/25/2023 13:50	33.3
152	4/25/2023 13:50	32.8
153	4/25/2023 13:50	32.6
154	4/25/2023 13:50	36.1
155	4/25/2023 13:50	34.5
156	4/25/2023 13:50	33.7
157	4/25/2023 13:50	33.1
158	4/25/2023 13:50	33.1
159	4/25/2023 13:51	33.3
160	4/25/2023 13:51	33.1
161	4/25/2023 13:51	32.5
162	4/25/2023 13:51	33.5
163	4/25/2023 13:51	34.5
164	4/25/2023 13:51	36.7
165	4/25/2023 13:51	41.7
166	4/25/2023 13:51	39.7
167	4/25/2023 13:51	39.2
168	4/25/2023 13:51	47.1
169	4/25/2023 13:51	38.3
170	4/25/2023 13:51	36.3
171	4/25/2023 13:51	37.3
172	4/25/2023 13:51	36
173	4/25/2023 13:51	35.4

174	4/25/2023 13:51	35
175	4/25/2023 13:51	35.1
176	4/25/2023 13:51	37.4
177	4/25/2023 13:51	35.8
178	4/25/2023 13:51	36
179	4/25/2023 13:52	35.9
180	4/25/2023 13:52	34.3
181	4/25/2023 13:52	34.6
182	4/25/2023 13:52	35.8
183	4/25/2023 13:52	34.3
184	4/25/2023 13:52	36.7
185	4/25/2023 13:52	39.5
186	4/25/2023 13:52	37.4
187	4/25/2023 13:52	36.7
188	4/25/2023 13:52	36.7
189	4/25/2023 13:52	34.2
190	4/25/2023 13:52	36.2
191	4/25/2023 13:52	38.5
192	4/25/2023 13:52	35.6
193	4/25/2023 13:52	36.2
194	4/25/2023 13:52	35.7
195	4/25/2023 13:52	34.4
196	4/25/2023 13:52	33.6
197	4/25/2023 13:52	34.5
198	4/25/2023 13:52	33.8
199	4/25/2023 13:53	33.1
200	4/25/2023 13:53	36
201	4/25/2023 13:53	35.6
202	4/25/2023 13:53	35.8
203	4/25/2023 13:53	36.3
204	4/25/2023 13:53	37
205	4/25/2023 13:53	34.7
206	4/25/2023 13:53	40.3
207	4/25/2023 13:53	36.4
208	4/25/2023 13:53	36
209	4/25/2023 13:53	33.7
210	4/25/2023 13:53	34.8
211	4/25/2023 13:53	33
212	4/25/2023 13:53	32.7
213	4/25/2023 13:53	32.5
214	4/25/2023 13:53	33.4
215	4/25/2023 13:53	34.3
216	4/25/2023 13:53	34.1
217	4/25/2023 13:53	36.5
218	4/25/2023 13:53	36.5
219	4/25/2023 13:54	37.9
220	4/25/2023 13:54	38.5

221	4/25/2023 13:54	38.6
222	4/25/2023 13:54	38.9
223	4/25/2023 13:54	39.5
224	4/25/2023 13:54	36.6
225	4/25/2023 13:54	34.8
226	4/25/2023 13:54	34
227	4/25/2023 13:54	39.2
228	4/25/2023 13:54	38.4
229	4/25/2023 13:54	37.1
230	4/25/2023 13:54	38
231	4/25/2023 13:54	39.7
232	4/25/2023 13:54	42.8
233	4/25/2023 13:54	43
234	4/25/2023 13:54	46.5
235	4/25/2023 13:54	42.6
236	4/25/2023 13:54	39.7
237	4/25/2023 13:54	37.4
238	4/25/2023 13:54	38.3
239	4/25/2023 13:55	36.9
240	4/25/2023 13:55	35.4
241	4/25/2023 13:55	35
242	4/25/2023 13:55	34.8
243	4/25/2023 13:55	35.4
244	4/25/2023 13:55	36
245	4/25/2023 13:55	37.1
246	4/25/2023 13:55	39.7
247	4/25/2023 13:55	40.1
248	4/25/2023 13:55	42.4
249	4/25/2023 13:55	40.2
250	4/25/2023 13:55	40.5
251	4/25/2023 13:55	38.9
252	4/25/2023 13:55	36
253	4/25/2023 13:55	34.7
254	4/25/2023 13:55	37.9
255	4/25/2023 13:55	36.3
256	4/25/2023 13:55	34.6
257	4/25/2023 13:55	34.5
258	4/25/2023 13:55	34.4
259	4/25/2023 13:56	36.7
260	4/25/2023 13:56	37.5
261	4/25/2023 13:56	36.9
262	4/25/2023 13:56	36.2
263	4/25/2023 13:56	36.2
264	4/25/2023 13:56	38.8
265	4/25/2023 13:56	37.9
266	4/25/2023 13:56	35.1
267	4/25/2023 13:56	35.5

268	4/25/2023 13:56	36.9
269	4/25/2023 13:56	37.9
270	4/25/2023 13:56	34.9
271	4/25/2023 13:56	36.6
272	4/25/2023 13:56	35.5
273	4/25/2023 13:56	34.1
274	4/25/2023 13:56	34.3
275	4/25/2023 13:56	36.2
276	4/25/2023 13:56	34.4
277	4/25/2023 13:56	36.9
278	4/25/2023 13:56	42
279	4/25/2023 13:57	39.5
280	4/25/2023 13:57	40.4
281	4/25/2023 13:57	40.1
282	4/25/2023 13:57	39.1
283	4/25/2023 13:57	39.5
284	4/25/2023 13:57	39.9
285	4/25/2023 13:57	39.9
286	4/25/2023 13:57	42.9
287	4/25/2023 13:57	37.7
288	4/25/2023 13:57	38
289	4/25/2023 13:57	38.8
290	4/25/2023 13:57	36.6
291	4/25/2023 13:57	43.2
292	4/25/2023 13:57	37.8
293	4/25/2023 13:57	36.9
294	4/25/2023 13:57	39
295	4/25/2023 13:57	34.6
296	4/25/2023 13:57	34.1
297	4/25/2023 13:57	34.3
298	4/25/2023 13:57	33.9
299	4/25/2023 13:58	34.6
300	4/25/2023 13:58	35.6

Data Logger 2
SET 3
A
SLOW
Range 30-90
L05 73.9
L10 67.5
L50 48.8
L90 42.7
L95 40.9
Max dB 85.0
4/25/2023 14:13
SEL 96.8
Leq 67.3

No.s	Date Time	dB
1	4/25/2023 14:11	50.6
2	4/25/2023 14:11	48.9
3	4/25/2023 14:11	44.8
4	4/25/2023 14:11	41.1
5	4/25/2023 14:11	42.7
6	4/25/2023 14:11	49.4
7	4/25/2023 14:11	78.3
8	4/25/2023 14:11	69.6
9	4/25/2023 14:11	71.5
10	4/25/2023 14:11	59.5
11	4/25/2023 14:11	51.3
12	4/25/2023 14:11	46.8
13	4/25/2023 14:11	46.9
14	4/25/2023 14:12	46
15	4/25/2023 14:12	45
16	4/25/2023 14:12	44.2
17	4/25/2023 14:12	43.3
18	4/25/2023 14:12	41.3
19	4/25/2023 14:12	43
20	4/25/2023 14:12	42.5
21	4/25/2023 14:12	41.6
22	4/25/2023 14:12	43
23	4/25/2023 14:12	41.8
24	4/25/2023 14:12	42.7
25	4/25/2023 14:12	41
26	4/25/2023 14:12	40.1
27	4/25/2023 14:12	42.7
28	4/25/2023 14:12	44.2
29	4/25/2023 14:12	47.8
30	4/25/2023 14:12	44.6
31	4/25/2023 14:12	57.1
32	4/25/2023 14:12	76.8

33	4/25/2023 14:12	64.5
34	4/25/2023 14:13	52.7
35	4/25/2023 14:13	45.5
36	4/25/2023 14:13	50
37	4/25/2023 14:13	74.2
38	4/25/2023 14:13	76.4
39	4/25/2023 14:13	64.1
40	4/25/2023 14:13	53.7
41	4/25/2023 14:13	71.1
42	4/25/2023 14:13	79
43	4/25/2023 14:13	66.8
44	4/25/2023 14:13	55.5
45	4/25/2023 14:13	73.9
46	4/25/2023 14:13	70.5
47	4/25/2023 14:13	58.3
48	4/25/2023 14:13	47.1
49	4/25/2023 14:13	48.1
50	4/25/2023 14:13	48.3
51	4/25/2023 14:13	47.4
52	4/25/2023 14:13	49.9
53	4/25/2023 14:13	50.8
54	4/25/2023 14:14	52.6
55	4/25/2023 14:14	53.3
56	4/25/2023 14:14	54
57	4/25/2023 14:14	58
58	4/25/2023 14:14	58.4
59	4/25/2023 14:14	58
60	4/25/2023 14:14	54
61	4/25/2023 14:14	52.3
62	4/25/2023 14:14	48.5
63	4/25/2023 14:14	44.7
64	4/25/2023 14:14	43.3
65	4/25/2023 14:14	45.6
66	4/25/2023 14:14	48
67	4/25/2023 14:14	45.4
68	4/25/2023 14:14	43.9
69	4/25/2023 14:14	43.8
70	4/25/2023 14:14	43.2
71	4/25/2023 14:14	43.1
72	4/25/2023 14:14	45.8
73	4/25/2023 14:14	52
74	4/25/2023 14:15	50.1
75	4/25/2023 14:15	45.8
76	4/25/2023 14:15	43
77	4/25/2023 14:15	46.9
78	4/25/2023 14:15	49.9
79	4/25/2023 14:15	47.6

80	4/25/2023 14:15	48.4
81	4/25/2023 14:15	45.8
82	4/25/2023 14:15	45.2
83	4/25/2023 14:15	45.4
84	4/25/2023 14:15	46.4
85	4/25/2023 14:15	49.5
86	4/25/2023 14:15	53.4
87	4/25/2023 14:15	50.5
88	4/25/2023 14:15	53.5
89	4/25/2023 14:15	53.4
90	4/25/2023 14:15	58.4
91	4/25/2023 14:15	77.9
92	4/25/2023 14:15	66.9
93	4/25/2023 14:15	54.9
94	4/25/2023 14:16	46.9
95	4/25/2023 14:16	46.3
96	4/25/2023 14:16	43.9
97	4/25/2023 14:16	44
98	4/25/2023 14:16	45.3
99	4/25/2023 14:16	49.5
100	4/25/2023 14:16	48.7
101	4/25/2023 14:16	55
102	4/25/2023 14:16	76.2
103	4/25/2023 14:16	64.1
104	4/25/2023 14:16	53.2
105	4/25/2023 14:16	46.7
106	4/25/2023 14:16	46.7
107	4/25/2023 14:16	47.3
108	4/25/2023 14:16	46.1
109	4/25/2023 14:16	45.4
110	4/25/2023 14:16	44.8
111	4/25/2023 14:16	44.1
112	4/25/2023 14:16	48
113	4/25/2023 14:16	48.5
114	4/25/2023 14:17	50.9
115	4/25/2023 14:17	54
116	4/25/2023 14:17	54.6
117	4/25/2023 14:17	51.5
118	4/25/2023 14:17	52.8
119	4/25/2023 14:17	51.4
120	4/25/2023 14:17	50.6
121	4/25/2023 14:17	52
122	4/25/2023 14:17	50.2
123	4/25/2023 14:17	48.2
124	4/25/2023 14:17	47.8
125	4/25/2023 14:17	47.1
126	4/25/2023 14:17	45

127	4/25/2023 14:17	46.9
128	4/25/2023 14:17	47.1
129	4/25/2023 14:17	46.6
130	4/25/2023 14:17	45.6
131	4/25/2023 14:17	44.4
132	4/25/2023 14:17	44.7
133	4/25/2023 14:17	43.9
134	4/25/2023 14:18	42.8
135	4/25/2023 14:18	47
136	4/25/2023 14:18	45.7
137	4/25/2023 14:18	47.6
138	4/25/2023 14:18	45.1
139	4/25/2023 14:18	44.7
140	4/25/2023 14:18	56.5
141	4/25/2023 14:18	83
142	4/25/2023 14:18	71.4
143	4/25/2023 14:18	59.4
144	4/25/2023 14:18	49.3
145	4/25/2023 14:18	42.9
146	4/25/2023 14:18	45.5
147	4/25/2023 14:18	49
148	4/25/2023 14:18	55.5
149	4/25/2023 14:18	80.1
150	4/25/2023 14:18	70.5
151	4/25/2023 14:18	58.7
152	4/25/2023 14:18	51.2
153	4/25/2023 14:18	46.3
154	4/25/2023 14:19	47.4
155	4/25/2023 14:19	42.6
156	4/25/2023 14:19	47
157	4/25/2023 14:19	52.1
158	4/25/2023 14:19	78.6
159	4/25/2023 14:19	73.6
160	4/25/2023 14:19	62.1
161	4/25/2023 14:19	57.8
162	4/25/2023 14:19	73.8
163	4/25/2023 14:19	62.8
164	4/25/2023 14:19	53.4
165	4/25/2023 14:19	49.1
166	4/25/2023 14:19	48.4
167	4/25/2023 14:19	47.9
168	4/25/2023 14:19	47.9
169	4/25/2023 14:19	48.3
170	4/25/2023 14:19	50.8
171	4/25/2023 14:19	51.8
172	4/25/2023 14:19	81.4
173	4/25/2023 14:19	72.6

174	4/25/2023 14:20	60.6
175	4/25/2023 14:20	51.9
176	4/25/2023 14:20	50.1
177	4/25/2023 14:20	47.6
178	4/25/2023 14:20	45.2
179	4/25/2023 14:20	47.1
180	4/25/2023 14:20	49.6
181	4/25/2023 14:20	50.8
182	4/25/2023 14:20	50.5
183	4/25/2023 14:20	48.5
184	4/25/2023 14:20	47.1
185	4/25/2023 14:20	50.4
186	4/25/2023 14:20	52.5
187	4/25/2023 14:20	51.2
188	4/25/2023 14:20	50.5
189	4/25/2023 14:20	48.3
190	4/25/2023 14:20	48.1
191	4/25/2023 14:20	47.9
192	4/25/2023 14:20	45.7
193	4/25/2023 14:20	50.4
194	4/25/2023 14:21	53.1
195	4/25/2023 14:21	58.8
196	4/25/2023 14:21	77.2
197	4/25/2023 14:21	70.7
198	4/25/2023 14:21	59.4
199	4/25/2023 14:21	49.3
200	4/25/2023 14:21	49.4
201	4/25/2023 14:21	50.4
202	4/25/2023 14:21	52.5
203	4/25/2023 14:21	51.5
204	4/25/2023 14:21	50.5
205	4/25/2023 14:21	48.6
206	4/25/2023 14:21	48.1
207	4/25/2023 14:21	47.5
208	4/25/2023 14:21	46.9
209	4/25/2023 14:21	46.8
210	4/25/2023 14:21	46.7
211	4/25/2023 14:21	52.4
212	4/25/2023 14:21	73
213	4/25/2023 14:21	73.2
214	4/25/2023 14:22	61
215	4/25/2023 14:22	50.3
216	4/25/2023 14:22	50.2
217	4/25/2023 14:22	48.5
218	4/25/2023 14:22	48.2
219	4/25/2023 14:22	47.4
220	4/25/2023 14:22	47.2

221	4/25/2023 14:22	47
222	4/25/2023 14:22	49
223	4/25/2023 14:22	50.2
224	4/25/2023 14:22	58.9
225	4/25/2023 14:22	79.6
226	4/25/2023 14:22	68.1
227	4/25/2023 14:22	55.8
228	4/25/2023 14:22	44.8
229	4/25/2023 14:22	40.6
230	4/25/2023 14:22	38.9
231	4/25/2023 14:22	39.1
232	4/25/2023 14:22	40
233	4/25/2023 14:22	40.9
234	4/25/2023 14:23	43.8
235	4/25/2023 14:23	44.2
236	4/25/2023 14:23	43.4
237	4/25/2023 14:23	46
238	4/25/2023 14:23	44.8
239	4/25/2023 14:23	39.2
240	4/25/2023 14:23	39.7
241	4/25/2023 14:23	38.4
242	4/25/2023 14:23	37.8
243	4/25/2023 14:23	37.9
244	4/25/2023 14:23	40.5
245	4/25/2023 14:23	42.5
246	4/25/2023 14:23	40.9
247	4/25/2023 14:23	39.8
248	4/25/2023 14:23	45.7
249	4/25/2023 14:23	45.9
250	4/25/2023 14:23	47.6
251	4/25/2023 14:23	57
252	4/25/2023 14:23	77.9
253	4/25/2023 14:23	66.4
254	4/25/2023 14:24	54.6
255	4/25/2023 14:24	48.5
256	4/25/2023 14:24	49.6
257	4/25/2023 14:24	47.5
258	4/25/2023 14:24	52
259	4/25/2023 14:24	53.6
260	4/25/2023 14:24	52.5
261	4/25/2023 14:24	46.7
262	4/25/2023 14:24	54.5
263	4/25/2023 14:24	51.3
264	4/25/2023 14:24	48.8
265	4/25/2023 14:24	46.9
266	4/25/2023 14:24	50.1
267	4/25/2023 14:24	50.5

268	4/25/2023 14:24	49.3
269	4/25/2023 14:24	48.9
270	4/25/2023 14:24	60.3
271	4/25/2023 14:24	78.9
272	4/25/2023 14:24	76
273	4/25/2023 14:24	66
274	4/25/2023 14:25	55.7
275	4/25/2023 14:25	65.1
276	4/25/2023 14:25	69
277	4/25/2023 14:25	57.3
278	4/25/2023 14:25	50.7
279	4/25/2023 14:25	45.9
280	4/25/2023 14:25	43.1
281	4/25/2023 14:25	46.4
282	4/25/2023 14:25	73.7
283	4/25/2023 14:25	68.5
284	4/25/2023 14:25	56.6
285	4/25/2023 14:25	48.1
286	4/25/2023 14:25	45.4
287	4/25/2023 14:25	47
288	4/25/2023 14:25	45.6
289	4/25/2023 14:25	48.3
290	4/25/2023 14:25	74.7
291	4/25/2023 14:25	69
292	4/25/2023 14:25	57.3
293	4/25/2023 14:25	47.6
294	4/25/2023 14:26	43.6
295	4/25/2023 14:26	41.3
296	4/25/2023 14:26	42.7
297	4/25/2023 14:26	45.3
298	4/25/2023 14:26	53.8
299	4/25/2023 14:26	75.1
300	4/25/2023 14:26	63.4

25-Hour Noise Measurement Avg Leq, CNEL, and Ldn Calculation Spreadsheet

Instructions

1. Open meter data in Excel.
2. Copy and paste values for into highlighted cells in spreadsheet.

Results	
25-hour average Leq	57.5
CNEL	64.0
Ldn	63.9

Duration (seconds) 240

No.s	Date Time	Date	Time	dB
1	7/18/2023 15:45	7/18/2023	3:45:31 PM	50.6
2	7/18/2023 15:49	7/18/2023	3:49:31 PM	35.3
3	7/18/2023 15:53	7/18/2023	3:53:31 PM	64.4
4	7/18/2023 15:57	7/18/2023	3:57:31 PM	31.1
5	7/18/2023 16:01	7/18/2023	4:01:31 PM	26.3
6	7/18/2023 16:05	7/18/2023	4:05:31 PM	25.9
7	7/18/2023 16:09	7/18/2023	4:09:31 PM	33.9
8	7/18/2023 16:13	7/18/2023	4:13:31 PM	30.6
9	7/18/2023 16:17	7/18/2023	4:17:31 PM	35.1
10	7/18/2023 16:21	7/18/2023	4:21:31 PM	40.3
11	7/18/2023 16:25	7/18/2023	4:25:31 PM	30.8
12	7/18/2023 16:29	7/18/2023	4:29:31 PM	35.1
13	7/18/2023 16:33	7/18/2023	4:33:31 PM	62.3
14	7/18/2023 16:37	7/18/2023	4:37:31 PM	36.3
15	7/18/2023 16:41	7/18/2023	4:41:31 PM	34.8
16	7/18/2023 16:45	7/18/2023	4:45:31 PM	49.8
17	7/18/2023 16:49	7/18/2023	4:49:31 PM	36.6
18	7/18/2023 16:53	7/18/2023	4:53:31 PM	34.1
19	7/18/2023 16:57	7/18/2023	4:57:31 PM	42.8
20	7/18/2023 17:01	7/18/2023	5:01:31 PM	33.4
21	7/18/2023 17:05	7/18/2023	5:05:31 PM	32.7
22	7/18/2023 17:09	7/18/2023	5:09:31 PM	38.5
23	7/18/2023 17:13	7/18/2023	5:13:31 PM	36.9
24	7/18/2023 17:17	7/18/2023	5:17:31 PM	31.4
25	7/18/2023 17:21	7/18/2023	5:21:31 PM	31.1
26	7/18/2023 17:25	7/18/2023	5:25:31 PM	29.9
27	7/18/2023 17:29	7/18/2023	5:29:31 PM	29
28	7/18/2023 17:33	7/18/2023	5:33:31 PM	29.5
29	7/18/2023 17:37	7/18/2023	5:37:31 PM	32.1
30	7/18/2023 17:41	7/18/2023	5:41:31 PM	30.5
31	7/18/2023 17:45	7/18/2023	5:45:31 PM	40.5
32	7/18/2023 17:49	7/18/2023	5:49:31 PM	60.7

33	7/18/2023 17:53	7/18/2023	5:53:31 PM	50.2
34	7/18/2023 17:57	7/18/2023	5:57:31 PM	30.1
35	7/18/2023 18:01	7/18/2023	6:01:31 PM	36.1
36	7/18/2023 18:05	7/18/2023	6:05:31 PM	34.6
37	7/18/2023 18:09	7/18/2023	6:09:31 PM	32.3
38	7/18/2023 18:13	7/18/2023	6:13:31 PM	33.3
39	7/18/2023 18:17	7/18/2023	6:17:31 PM	36.2
40	7/18/2023 18:21	7/18/2023	6:21:31 PM	31.7
41	7/18/2023 18:25	7/18/2023	6:25:31 PM	38.9
42	7/18/2023 18:29	7/18/2023	6:29:31 PM	35.2
43	7/18/2023 18:33	7/18/2023	6:33:31 PM	38.9
44	7/18/2023 18:37	7/18/2023	6:37:31 PM	36.2
45	7/18/2023 18:41	7/18/2023	6:41:31 PM	35.3
46	7/18/2023 18:45	7/18/2023	6:45:31 PM	33.3
47	7/18/2023 18:49	7/18/2023	6:49:31 PM	36.8
48	7/18/2023 18:53	7/18/2023	6:53:31 PM	43.4
49	7/18/2023 18:57	7/18/2023	6:57:31 PM	31.8
50	7/18/2023 19:01	7/18/2023	7:01:31 PM	35.5
51	7/18/2023 19:05	7/18/2023	7:05:31 PM	47.4
52	7/18/2023 19:09	7/18/2023	7:09:31 PM	44.7
53	7/18/2023 19:13	7/18/2023	7:13:31 PM	43.3
54	7/18/2023 19:17	7/18/2023	7:17:31 PM	43.2
55	7/18/2023 19:21	7/18/2023	7:21:31 PM	46
56	7/18/2023 19:25	7/18/2023	7:25:31 PM	45.4
57	7/18/2023 19:29	7/18/2023	7:29:31 PM	43.2
58	7/18/2023 19:33	7/18/2023	7:33:31 PM	40.8
59	7/18/2023 19:37	7/18/2023	7:37:31 PM	66.5
60	7/18/2023 19:41	7/18/2023	7:41:31 PM	65.9
61	7/18/2023 19:45	7/18/2023	7:45:31 PM	35.9
62	7/18/2023 19:49	7/18/2023	7:49:31 PM	37.3
63	7/18/2023 19:53	7/18/2023	7:53:31 PM	34.6
64	7/18/2023 19:57	7/18/2023	7:57:31 PM	33.7
65	7/18/2023 20:01	7/18/2023	8:01:31 PM	43.5
66	7/18/2023 20:05	7/18/2023	8:05:31 PM	46
67	7/18/2023 20:09	7/18/2023	8:09:31 PM	45.9
68	7/18/2023 20:13	7/18/2023	8:13:31 PM	56.3
69	7/18/2023 20:17	7/18/2023	8:17:31 PM	42.2
70	7/18/2023 20:21	7/18/2023	8:21:31 PM	45.8
71	7/18/2023 20:25	7/18/2023	8:25:31 PM	62.3
72	7/18/2023 20:29	7/18/2023	8:29:31 PM	47.3
73	7/18/2023 20:33	7/18/2023	8:33:31 PM	49.3
74	7/18/2023 20:37	7/18/2023	8:37:31 PM	55.6
75	7/18/2023 20:41	7/18/2023	8:41:31 PM	55.7
76	7/18/2023 20:45	7/18/2023	8:45:31 PM	55.8
77	7/18/2023 20:49	7/18/2023	8:49:31 PM	47.3
78	7/18/2023 20:53	7/18/2023	8:53:31 PM	47.7
79	7/18/2023 20:57	7/18/2023	8:57:31 PM	51.1

80	7/18/2023 21:01	7/18/2023	9:01:31 PM	48.3
81	7/18/2023 21:05	7/18/2023	9:05:31 PM	53
82	7/18/2023 21:09	7/18/2023	9:09:31 PM	50.3
83	7/18/2023 21:13	7/18/2023	9:13:31 PM	47.9
84	7/18/2023 21:17	7/18/2023	9:17:31 PM	47.4
85	7/18/2023 21:21	7/18/2023	9:21:31 PM	49.7
86	7/18/2023 21:25	7/18/2023	9:25:31 PM	48.2
87	7/18/2023 21:29	7/18/2023	9:29:31 PM	50
88	7/18/2023 21:33	7/18/2023	9:33:31 PM	49.1
89	7/18/2023 21:37	7/18/2023	9:37:31 PM	50.1
90	7/18/2023 21:41	7/18/2023	9:41:31 PM	47.8
91	7/18/2023 21:45	7/18/2023	9:45:31 PM	49.1
92	7/18/2023 21:49	7/18/2023	9:49:31 PM	51
93	7/18/2023 21:53	7/18/2023	9:53:31 PM	50.1
94	7/18/2023 21:57	7/18/2023	9:57:31 PM	62
95	7/18/2023 22:01	7/18/2023	10:01:31 PM	44.3
96	7/18/2023 22:05	7/18/2023	10:05:31 PM	47.2
97	7/18/2023 22:09	7/18/2023	10:09:31 PM	50.4
98	7/18/2023 22:13	7/18/2023	10:13:31 PM	49
99	7/18/2023 22:17	7/18/2023	10:17:31 PM	48.3
100	7/18/2023 22:21	7/18/2023	10:21:31 PM	47
101	7/18/2023 22:25	7/18/2023	10:25:31 PM	46
102	7/18/2023 22:29	7/18/2023	10:29:31 PM	41.5
103	7/18/2023 22:33	7/18/2023	10:33:31 PM	42.3
104	7/18/2023 22:37	7/18/2023	10:37:31 PM	42.9
105	7/18/2023 22:41	7/18/2023	10:41:31 PM	40
106	7/18/2023 22:45	7/18/2023	10:45:31 PM	41.4
107	7/18/2023 22:49	7/18/2023	10:49:31 PM	47.8
108	7/18/2023 22:53	7/18/2023	10:53:31 PM	48.3
109	7/18/2023 22:57	7/18/2023	10:57:31 PM	48.1
110	7/18/2023 23:01	7/18/2023	11:01:31 PM	45.8
111	7/18/2023 23:05	7/18/2023	11:05:31 PM	40.5
112	7/18/2023 23:09	7/18/2023	11:09:31 PM	43.7
113	7/18/2023 23:13	7/18/2023	11:13:31 PM	45.5
114	7/18/2023 23:17	7/18/2023	11:17:31 PM	45.6
115	7/18/2023 23:21	7/18/2023	11:21:31 PM	42.5
116	7/18/2023 23:25	7/18/2023	11:25:31 PM	46.1
117	7/18/2023 23:29	7/18/2023	11:29:31 PM	44.7
118	7/18/2023 23:33	7/18/2023	11:33:31 PM	45.7
119	7/18/2023 23:37	7/18/2023	11:37:31 PM	44.8
120	7/18/2023 23:41	7/18/2023	11:41:31 PM	44.4
121	7/18/2023 23:45	7/18/2023	11:45:31 PM	45.6
122	7/18/2023 23:49	7/18/2023	11:49:31 PM	50
123	7/18/2023 23:53	7/18/2023	11:53:31 PM	49.6
124	7/18/2023 23:57	7/18/2023	11:57:31 PM	49.3
125	7/19/2023 0:01	7/19/2023	12:01:31 AM	40.5
126	7/19/2023 0:05	7/19/2023	12:05:31 AM	43.8

127	7/19/2023 0:09	7/19/2023	12:09:31 AM	41.7
128	7/19/2023 0:13	7/19/2023	12:13:31 AM	39.3
129	7/19/2023 0:17	7/19/2023	12:17:31 AM	40.9
130	7/19/2023 0:21	7/19/2023	12:21:31 AM	40
131	7/19/2023 0:25	7/19/2023	12:25:31 AM	40.9
132	7/19/2023 0:29	7/19/2023	12:29:31 AM	42.7
133	7/19/2023 0:33	7/19/2023	12:33:31 AM	42.4
134	7/19/2023 0:37	7/19/2023	12:37:31 AM	43
135	7/19/2023 0:41	7/19/2023	12:41:31 AM	42.8
136	7/19/2023 0:45	7/19/2023	12:45:31 AM	41.1
137	7/19/2023 0:49	7/19/2023	12:49:31 AM	43.4
138	7/19/2023 0:53	7/19/2023	12:53:31 AM	46
139	7/19/2023 0:57	7/19/2023	12:57:31 AM	40.3
140	7/19/2023 1:01	7/19/2023	1:01:31 AM	46.5
141	7/19/2023 1:05	7/19/2023	1:05:31 AM	45.8
142	7/19/2023 1:09	7/19/2023	1:09:31 AM	46.9
143	7/19/2023 1:13	7/19/2023	1:13:31 AM	48.9
144	7/19/2023 1:17	7/19/2023	1:17:31 AM	41.9
145	7/19/2023 1:21	7/19/2023	1:21:31 AM	46.6
146	7/19/2023 1:25	7/19/2023	1:25:31 AM	47.4
147	7/19/2023 1:29	7/19/2023	1:29:31 AM	47.4
148	7/19/2023 1:33	7/19/2023	1:33:31 AM	42
149	7/19/2023 1:37	7/19/2023	1:37:31 AM	41.8
150	7/19/2023 1:41	7/19/2023	1:41:31 AM	46.9
151	7/19/2023 1:45	7/19/2023	1:45:31 AM	45.8
152	7/19/2023 1:49	7/19/2023	1:49:31 AM	43.8
153	7/19/2023 1:53	7/19/2023	1:53:31 AM	43.2
154	7/19/2023 1:57	7/19/2023	1:57:31 AM	43
155	7/19/2023 2:01	7/19/2023	2:01:31 AM	44.7
156	7/19/2023 2:05	7/19/2023	2:05:31 AM	45
157	7/19/2023 2:09	7/19/2023	2:09:31 AM	44.6
158	7/19/2023 2:13	7/19/2023	2:13:31 AM	44
159	7/19/2023 2:17	7/19/2023	2:17:31 AM	50.3
160	7/19/2023 2:21	7/19/2023	2:21:31 AM	50.6
161	7/19/2023 2:25	7/19/2023	2:25:31 AM	51.2
162	7/19/2023 2:29	7/19/2023	2:29:31 AM	51.1
163	7/19/2023 2:33	7/19/2023	2:33:31 AM	50.8
164	7/19/2023 2:37	7/19/2023	2:37:31 AM	52.1
165	7/19/2023 2:41	7/19/2023	2:41:31 AM	52.8
166	7/19/2023 2:45	7/19/2023	2:45:31 AM	50.8
167	7/19/2023 2:49	7/19/2023	2:49:31 AM	51.8
168	7/19/2023 2:53	7/19/2023	2:53:31 AM	52.4
169	7/19/2023 2:57	7/19/2023	2:57:31 AM	51.8
170	7/19/2023 3:01	7/19/2023	3:01:31 AM	52.4
171	7/19/2023 3:05	7/19/2023	3:05:31 AM	54.8
172	7/19/2023 3:09	7/19/2023	3:09:31 AM	49.7
173	7/19/2023 3:13	7/19/2023	3:13:31 AM	54

174	7/19/2023 3:17	7/19/2023	3:17:31 AM	48.7
175	7/19/2023 3:21	7/19/2023	3:21:31 AM	46
176	7/19/2023 3:25	7/19/2023	3:25:31 AM	47.7
177	7/19/2023 3:29	7/19/2023	3:29:31 AM	52.8
178	7/19/2023 3:33	7/19/2023	3:33:31 AM	46.2
179	7/19/2023 3:37	7/19/2023	3:37:31 AM	57.1
180	7/19/2023 3:41	7/19/2023	3:41:31 AM	51.9
181	7/19/2023 3:45	7/19/2023	3:45:31 AM	50
182	7/19/2023 3:49	7/19/2023	3:49:31 AM	50.6
183	7/19/2023 3:53	7/19/2023	3:53:31 AM	66.4
184	7/19/2023 3:57	7/19/2023	3:57:31 AM	49.8
185	7/19/2023 4:01	7/19/2023	4:01:31 AM	50.5
186	7/19/2023 4:05	7/19/2023	4:05:31 AM	51.1
187	7/19/2023 4:09	7/19/2023	4:09:31 AM	45.2
188	7/19/2023 4:13	7/19/2023	4:13:31 AM	49.3
189	7/19/2023 4:17	7/19/2023	4:17:31 AM	60.5
190	7/19/2023 4:21	7/19/2023	4:21:31 AM	60.6
191	7/19/2023 4:25	7/19/2023	4:25:31 AM	42.3
192	7/19/2023 4:29	7/19/2023	4:29:31 AM	61
193	7/19/2023 4:33	7/19/2023	4:33:31 AM	46.1
194	7/19/2023 4:37	7/19/2023	4:37:31 AM	47.2
195	7/19/2023 4:41	7/19/2023	4:41:31 AM	47.3
196	7/19/2023 4:45	7/19/2023	4:45:31 AM	47.8
197	7/19/2023 4:49	7/19/2023	4:49:31 AM	45.5
198	7/19/2023 4:53	7/19/2023	4:53:31 AM	46.4
199	7/19/2023 4:57	7/19/2023	4:57:31 AM	71.2
200	7/19/2023 5:01	7/19/2023	5:01:31 AM	49.5
201	7/19/2023 5:05	7/19/2023	5:05:31 AM	47.9
202	7/19/2023 5:09	7/19/2023	5:09:31 AM	49
203	7/19/2023 5:13	7/19/2023	5:13:31 AM	50.8
204	7/19/2023 5:17	7/19/2023	5:17:31 AM	50.6
205	7/19/2023 5:21	7/19/2023	5:21:31 AM	50.4
206	7/19/2023 5:25	7/19/2023	5:25:31 AM	60
207	7/19/2023 5:29	7/19/2023	5:29:31 AM	55.4
208	7/19/2023 5:33	7/19/2023	5:33:31 AM	51
209	7/19/2023 5:37	7/19/2023	5:37:31 AM	48.3
210	7/19/2023 5:41	7/19/2023	5:41:31 AM	59.4
211	7/19/2023 5:45	7/19/2023	5:45:31 AM	48.6
212	7/19/2023 5:49	7/19/2023	5:49:31 AM	52.3
213	7/19/2023 5:53	7/19/2023	5:53:31 AM	46.6
214	7/19/2023 5:57	7/19/2023	5:57:31 AM	48.6
215	7/19/2023 6:01	7/19/2023	6:01:31 AM	76.4
216	7/19/2023 6:05	7/19/2023	6:05:31 AM	46.2
217	7/19/2023 6:09	7/19/2023	6:09:31 AM	46.1
218	7/19/2023 6:13	7/19/2023	6:13:31 AM	48
219	7/19/2023 6:17	7/19/2023	6:17:31 AM	45.4
220	7/19/2023 6:21	7/19/2023	6:21:31 AM	42.3

221	7/19/2023 6:25	7/19/2023	6:25:31 AM	51.7
222	7/19/2023 6:29	7/19/2023	6:29:31 AM	46.9
223	7/19/2023 6:33	7/19/2023	6:33:31 AM	41.4
224	7/19/2023 6:37	7/19/2023	6:37:31 AM	39
225	7/19/2023 6:41	7/19/2023	6:41:31 AM	38.5
226	7/19/2023 6:45	7/19/2023	6:45:31 AM	41.9
227	7/19/2023 6:49	7/19/2023	6:49:31 AM	48.3
228	7/19/2023 6:53	7/19/2023	6:53:31 AM	53.5
229	7/19/2023 6:57	7/19/2023	6:57:31 AM	45.3
230	7/19/2023 7:01	7/19/2023	7:01:31 AM	43.7
231	7/19/2023 7:05	7/19/2023	7:05:31 AM	46.9
232	7/19/2023 7:09	7/19/2023	7:09:31 AM	39.9
233	7/19/2023 7:13	7/19/2023	7:13:31 AM	36.9
234	7/19/2023 7:17	7/19/2023	7:17:31 AM	36.5
235	7/19/2023 7:21	7/19/2023	7:21:31 AM	63.6
236	7/19/2023 7:25	7/19/2023	7:25:31 AM	37.3
237	7/19/2023 7:29	7/19/2023	7:29:31 AM	43.6
238	7/19/2023 7:33	7/19/2023	7:33:31 AM	53
239	7/19/2023 7:37	7/19/2023	7:37:31 AM	41.6
240	7/19/2023 7:41	7/19/2023	7:41:31 AM	40.8
241	7/19/2023 7:45	7/19/2023	7:45:31 AM	51.8
242	7/19/2023 7:49	7/19/2023	7:49:31 AM	60
243	7/19/2023 7:53	7/19/2023	7:53:31 AM	42.7
244	7/19/2023 7:57	7/19/2023	7:57:31 AM	39.2
245	7/19/2023 8:01	7/19/2023	8:01:31 AM	37.6
246	7/19/2023 8:05	7/19/2023	8:05:31 AM	42.4
247	7/19/2023 8:09	7/19/2023	8:09:31 AM	37.4
248	7/19/2023 8:13	7/19/2023	8:13:31 AM	40.7
249	7/19/2023 8:17	7/19/2023	8:17:31 AM	35.1
250	7/19/2023 8:21	7/19/2023	8:21:31 AM	40.3
251	7/19/2023 8:25	7/19/2023	8:25:31 AM	43.3
252	7/19/2023 8:29	7/19/2023	8:29:31 AM	40.3
253	7/19/2023 8:33	7/19/2023	8:33:31 AM	37.4
254	7/19/2023 8:37	7/19/2023	8:37:31 AM	56.8
255	7/19/2023 8:41	7/19/2023	8:41:31 AM	35.5
256	7/19/2023 8:45	7/19/2023	8:45:31 AM	37
257	7/19/2023 8:49	7/19/2023	8:49:31 AM	41.3
258	7/19/2023 8:53	7/19/2023	8:53:31 AM	42.1
259	7/19/2023 8:57	7/19/2023	8:57:31 AM	37.2
260	7/19/2023 9:01	7/19/2023	9:01:31 AM	60.2
261	7/19/2023 9:05	7/19/2023	9:05:31 AM	39.6
262	7/19/2023 9:09	7/19/2023	9:09:31 AM	33.1
263	7/19/2023 9:13	7/19/2023	9:13:31 AM	55.1
264	7/19/2023 9:17	7/19/2023	9:17:31 AM	70.2
265	7/19/2023 9:21	7/19/2023	9:21:31 AM	38.1
266	7/19/2023 9:25	7/19/2023	9:25:31 AM	53.3
267	7/19/2023 9:29	7/19/2023	9:29:31 AM	41.6

268	7/19/2023 9:33	7/19/2023	9:33:31 AM	44.2
269	7/19/2023 9:37	7/19/2023	9:37:31 AM	41.3
270	7/19/2023 9:41	7/19/2023	9:41:31 AM	39.7
271	7/19/2023 9:45	7/19/2023	9:45:31 AM	64.5
272	7/19/2023 9:49	7/19/2023	9:49:31 AM	39.7
273	7/19/2023 9:53	7/19/2023	9:53:31 AM	42.5
274	7/19/2023 9:57	7/19/2023	9:57:31 AM	32.3
275	7/19/2023 10:01	7/19/2023	10:01:31 AM	39.8
276	7/19/2023 10:05	7/19/2023	10:05:31 AM	39.1
277	7/19/2023 10:09	7/19/2023	10:09:31 AM	34.4
278	7/19/2023 10:13	7/19/2023	10:13:31 AM	37.1
279	7/19/2023 10:17	7/19/2023	10:17:31 AM	39.2
280	7/19/2023 10:21	7/19/2023	10:21:31 AM	38.3
281	7/19/2023 10:25	7/19/2023	10:25:31 AM	32.9
282	7/19/2023 10:29	7/19/2023	10:29:31 AM	53.4
283	7/19/2023 10:33	7/19/2023	10:33:31 AM	39
284	7/19/2023 10:37	7/19/2023	10:37:31 AM	55.4
285	7/19/2023 10:41	7/19/2023	10:41:31 AM	38.2
286	7/19/2023 10:45	7/19/2023	10:45:31 AM	33.7
287	7/19/2023 10:49	7/19/2023	10:49:31 AM	35.5
288	7/19/2023 10:53	7/19/2023	10:53:31 AM	38.5
289	7/19/2023 10:57	7/19/2023	10:57:31 AM	40.2
290	7/19/2023 11:01	7/19/2023	11:01:31 AM	40.2
291	7/19/2023 11:05	7/19/2023	11:05:31 AM	40.7
292	7/19/2023 11:09	7/19/2023	11:09:31 AM	60.9
293	7/19/2023 11:13	7/19/2023	11:13:31 AM	40.7
294	7/19/2023 11:17	7/19/2023	11:17:31 AM	52.3
295	7/19/2023 11:21	7/19/2023	11:21:31 AM	34.5
296	7/19/2023 11:25	7/19/2023	11:25:31 AM	49.8
297	7/19/2023 11:29	7/19/2023	11:29:31 AM	32.3
298	7/19/2023 11:33	7/19/2023	11:33:31 AM	62.7
299	7/19/2023 11:37	7/19/2023	11:37:31 AM	28.6
300	7/19/2023 11:41	7/19/2023	11:41:31 AM	30.3
301	7/19/2023 11:45	7/19/2023	11:45:31 AM	29.9
302	7/19/2023 11:49	7/19/2023	11:49:31 AM	29.6
303	7/19/2023 11:53	7/19/2023	11:53:31 AM	28.2
304	7/19/2023 11:57	7/19/2023	11:57:31 AM	31.4
305	7/19/2023 12:01	7/19/2023	12:01:31 PM	50.3
306	7/19/2023 12:05	7/19/2023	12:05:31 PM	30.4
307	7/19/2023 12:09	7/19/2023	12:09:31 PM	29.2
308	7/19/2023 12:13	7/19/2023	12:13:31 PM	58
309	7/19/2023 12:17	7/19/2023	12:17:31 PM	32.8
310	7/19/2023 12:21	7/19/2023	12:21:31 PM	36.9
311	7/19/2023 12:25	7/19/2023	12:25:31 PM	44.4
312	7/19/2023 12:29	7/19/2023	12:29:31 PM	61
313	7/19/2023 12:33	7/19/2023	12:33:31 PM	56.3
314	7/19/2023 12:37	7/19/2023	12:37:31 PM	28.2

315	7/19/2023 12:41	7/19/2023	12:41:31 PM	52.8
316	7/19/2023 12:45	7/19/2023	12:45:31 PM	28.1
317	7/19/2023 12:49	7/19/2023	12:49:31 PM	40.8
318	7/19/2023 12:53	7/19/2023	12:53:31 PM	27.1
319	7/19/2023 12:57	7/19/2023	12:57:31 PM	26.5
320	7/19/2023 13:01	7/19/2023	1:01:31 PM	28.3
321	7/19/2023 13:05	7/19/2023	1:05:31 PM	71.8
322	7/19/2023 13:09	7/19/2023	1:09:31 PM	54.3
323	7/19/2023 13:13	7/19/2023	1:13:31 PM	28.2
324	7/19/2023 13:17	7/19/2023	1:17:31 PM	37
325	7/19/2023 13:21	7/19/2023	1:21:31 PM	33.8
326	7/19/2023 13:25	7/19/2023	1:25:31 PM	33.2
327	7/19/2023 13:29	7/19/2023	1:29:31 PM	26.8
328	7/19/2023 13:33	7/19/2023	1:33:31 PM	30.9
329	7/19/2023 13:37	7/19/2023	1:37:31 PM	29.3
330	7/19/2023 13:41	7/19/2023	1:41:31 PM	29.1
331	7/19/2023 13:45	7/19/2023	1:45:31 PM	35.4
332	7/19/2023 13:49	7/19/2023	1:49:31 PM	48.2
333	7/19/2023 13:53	7/19/2023	1:53:31 PM	74
334	7/19/2023 13:57	7/19/2023	1:57:31 PM	64.4
335	7/19/2023 14:01	7/19/2023	2:01:31 PM	37.7
336	7/19/2023 14:05	7/19/2023	2:05:31 PM	38
337	7/19/2023 14:09	7/19/2023	2:09:31 PM	30
338	7/19/2023 14:13	7/19/2023	2:13:31 PM	38.6
339	7/19/2023 14:17	7/19/2023	2:17:31 PM	31.4
340	7/19/2023 14:21	7/19/2023	2:21:31 PM	51
341	7/19/2023 14:25	7/19/2023	2:25:31 PM	31.6
342	7/19/2023 14:29	7/19/2023	2:29:31 PM	74.8
343	7/19/2023 14:33	7/19/2023	2:33:31 PM	31.5
344	7/19/2023 14:37	7/19/2023	2:37:31 PM	31.8
345	7/19/2023 14:41	7/19/2023	2:41:31 PM	29.2
346	7/19/2023 14:45	7/19/2023	2:45:31 PM	54.3
347	7/19/2023 14:49	7/19/2023	2:49:31 PM	30.8
348	7/19/2023 14:53	7/19/2023	2:53:31 PM	31.7
349	7/19/2023 14:57	7/19/2023	2:57:31 PM	30.1
350	7/19/2023 15:01	7/19/2023	3:01:31 PM	31.5
351	7/19/2023 15:05	7/19/2023	3:05:31 PM	42.2
352	7/19/2023 15:09	7/19/2023	3:09:31 PM	41.1
353	7/19/2023 15:13	7/19/2023	3:13:31 PM	54.7
354	7/19/2023 15:17	7/19/2023	3:17:31 PM	65.2
355	7/19/2023 15:21	7/19/2023	3:21:31 PM	41.9
356	7/19/2023 15:25	7/19/2023	3:25:31 PM	34
357	7/19/2023 15:29	7/19/2023	3:29:31 PM	50.9
358	7/19/2023 15:33	7/19/2023	3:33:31 PM	30
359	7/19/2023 15:37	7/19/2023	3:37:31 PM	30.3
360	7/19/2023 15:41	7/19/2023	3:41:31 PM	54.1

Projects Site Noise Monitoring Results – Long Term

Sample Time	dBA L_{eq}	Sample Time	dBA L_{eq}
LT1 – Southwestern Portion of Project Site, May 3 – 4, 2022			
3:45 p.m.	55	4:45 a.m.	60
4:45 p.m.	40	5:45 a.m.	65
5:45 p.m.	49	6:45 a.m.	53
6:45 p.m.	58	7:45 a.m.	51
7:45 p.m.	53	8:45 a.m.	59
8:45 p.m.	50	9:45 a.m.	54
9:45 p.m.	52	10:45 a.m.	54
10:45 p.m.	46	11:45 a.m.	52
11:45 p.m.	45	12:45 p.m.	60
12:45 a.m.	46	1:45 p.m.	66
1:45 a.m.	49	2:45 p.m.	55
2:45 a.m.	52	3:46 p.m.	44
3:45 a.m.	58		

No.s	Date Time	dB
1	7/18/2023 15:45	50.6
2	7/18/2023 15:49	35.3
3	7/18/2023 15:53	64.4
4	7/18/2023 15:57	31.1
5	7/18/2023 16:01	26.3
6	7/18/2023 16:05	25.9
7	7/18/2023 16:09	33.9
8	7/18/2023 16:13	30.6
9	7/18/2023 16:17	35.1
10	7/18/2023 16:21	40.3
11	7/18/2023 16:25	30.8
12	7/18/2023 16:29	35.1
13	7/18/2023 16:33	62.3
14	7/18/2023 16:37	36.3
15	7/18/2023 16:41	34.8
16	7/18/2023 16:45	49.8
17	7/18/2023 16:49	36.6
18	7/18/2023 16:53	34.1
19	7/18/2023 16:57	42.8
20	7/18/2023 17:01	33.4
21	7/18/2023 17:05	32.7
22	7/18/2023 17:09	38.5
23	7/18/2023 17:13	36.9
24	7/18/2023 17:17	31.4
25	7/18/2023 17:21	31.1
26	7/18/2023 17:25	29.9
27	7/18/2023 17:29	29
28	7/18/2023 17:33	29.5
29	7/18/2023 17:37	32.1
30	7/18/2023 17:41	30.5
31	7/18/2023 17:45	40.5
32	7/18/2023 17:49	60.7

33	7/18/2023 17:53	50.2
34	7/18/2023 17:57	30.1
35	7/18/2023 18:01	36.1
36	7/18/2023 18:05	34.6
37	7/18/2023 18:09	32.3
38	7/18/2023 18:13	33.3
39	7/18/2023 18:17	36.2
40	7/18/2023 18:21	31.7
41	7/18/2023 18:25	38.9
42	7/18/2023 18:29	35.2
43	7/18/2023 18:33	38.9
44	7/18/2023 18:37	36.2
45	7/18/2023 18:41	35.3
46	7/18/2023 18:45	33.3
47	7/18/2023 18:49	36.8
48	7/18/2023 18:53	43.4
49	7/18/2023 18:57	31.8
50	7/18/2023 19:01	35.5
51	7/18/2023 19:05	47.4
52	7/18/2023 19:09	44.7
53	7/18/2023 19:13	43.3
54	7/18/2023 19:17	43.2
55	7/18/2023 19:21	46
56	7/18/2023 19:25	45.4
57	7/18/2023 19:29	43.2
58	7/18/2023 19:33	40.8
59	7/18/2023 19:37	66.5
60	7/18/2023 19:41	65.9
61	7/18/2023 19:45	35.9
62	7/18/2023 19:49	37.3
63	7/18/2023 19:53	34.6
64	7/18/2023 19:57	33.7
65	7/18/2023 20:01	43.5
66	7/18/2023 20:05	46
67	7/18/2023 20:09	45.9
68	7/18/2023 20:13	56.3
69	7/18/2023 20:17	42.2
70	7/18/2023 20:21	45.8
71	7/18/2023 20:25	62.3
72	7/18/2023 20:29	47.3
73	7/18/2023 20:33	49.3
74	7/18/2023 20:37	55.6
75	7/18/2023 20:41	55.7
76	7/18/2023 20:45	55.8
77	7/18/2023 20:49	47.3
78	7/18/2023 20:53	47.7
79	7/18/2023 20:57	51.1

80	7/18/2023 21:01	48.3
81	7/18/2023 21:05	53
82	7/18/2023 21:09	50.3
83	7/18/2023 21:13	47.9
84	7/18/2023 21:17	47.4
85	7/18/2023 21:21	49.7
86	7/18/2023 21:25	48.2
87	7/18/2023 21:29	50
88	7/18/2023 21:33	49.1
89	7/18/2023 21:37	50.1
90	7/18/2023 21:41	47.8
91	7/18/2023 21:45	49.1
92	7/18/2023 21:49	51
93	7/18/2023 21:53	50.1
94	7/18/2023 21:57	62
95	7/18/2023 22:01	44.3
96	7/18/2023 22:05	47.2
97	7/18/2023 22:09	50.4
98	7/18/2023 22:13	49
99	7/18/2023 22:17	48.3
100	7/18/2023 22:21	47
101	7/18/2023 22:25	46
102	7/18/2023 22:29	41.5
103	7/18/2023 22:33	42.3
104	7/18/2023 22:37	42.9
105	7/18/2023 22:41	40
106	7/18/2023 22:45	41.4
107	7/18/2023 22:49	47.8
108	7/18/2023 22:53	48.3
109	7/18/2023 22:57	48.1
110	7/18/2023 23:01	45.8
111	7/18/2023 23:05	40.5
112	7/18/2023 23:09	43.7
113	7/18/2023 23:13	45.5
114	7/18/2023 23:17	45.6
115	7/18/2023 23:21	42.5
116	7/18/2023 23:25	46.1
117	7/18/2023 23:29	44.7
118	7/18/2023 23:33	45.7
119	7/18/2023 23:37	44.8
120	7/18/2023 23:41	44.4
121	7/18/2023 23:45	45.6
122	7/18/2023 23:49	50
123	7/18/2023 23:53	49.6
124	7/18/2023 23:57	49.3
125	7/19/2023 0:01	40.5
126	7/19/2023 0:05	43.8

127	7/19/2023 0:09	41.7
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130	7/19/2023 0:21	40
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132	7/19/2023 0:29	42.7
133	7/19/2023 0:33	42.4
134	7/19/2023 0:37	43
135	7/19/2023 0:41	42.8
136	7/19/2023 0:45	41.1
137	7/19/2023 0:49	43.4
138	7/19/2023 0:53	46
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140	7/19/2023 1:01	46.5
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143	7/19/2023 1:13	48.9
144	7/19/2023 1:17	41.9
145	7/19/2023 1:21	46.6
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147	7/19/2023 1:29	47.4
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149	7/19/2023 1:37	41.8
150	7/19/2023 1:41	46.9
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152	7/19/2023 1:49	43.8
153	7/19/2023 1:53	43.2
154	7/19/2023 1:57	43
155	7/19/2023 2:01	44.7
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157	7/19/2023 2:09	44.6
158	7/19/2023 2:13	44
159	7/19/2023 2:17	50.3
160	7/19/2023 2:21	50.6
161	7/19/2023 2:25	51.2
162	7/19/2023 2:29	51.1
163	7/19/2023 2:33	50.8
164	7/19/2023 2:37	52.1
165	7/19/2023 2:41	52.8
166	7/19/2023 2:45	50.8
167	7/19/2023 2:49	51.8
168	7/19/2023 2:53	52.4
169	7/19/2023 2:57	51.8
170	7/19/2023 3:01	52.4
171	7/19/2023 3:05	54.8
172	7/19/2023 3:09	49.7
173	7/19/2023 3:13	54

174	7/19/2023 3:17	48.7
175	7/19/2023 3:21	46
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177	7/19/2023 3:29	52.8
178	7/19/2023 3:33	46.2
179	7/19/2023 3:37	57.1
180	7/19/2023 3:41	51.9
181	7/19/2023 3:45	50
182	7/19/2023 3:49	50.6
183	7/19/2023 3:53	66.4
184	7/19/2023 3:57	49.8
185	7/19/2023 4:01	50.5
186	7/19/2023 4:05	51.1
187	7/19/2023 4:09	45.2
188	7/19/2023 4:13	49.3
189	7/19/2023 4:17	60.5
190	7/19/2023 4:21	60.6
191	7/19/2023 4:25	42.3
192	7/19/2023 4:29	61
193	7/19/2023 4:33	46.1
194	7/19/2023 4:37	47.2
195	7/19/2023 4:41	47.3
196	7/19/2023 4:45	47.8
197	7/19/2023 4:49	45.5
198	7/19/2023 4:53	46.4
199	7/19/2023 4:57	71.2
200	7/19/2023 5:01	49.5
201	7/19/2023 5:05	47.9
202	7/19/2023 5:09	49
203	7/19/2023 5:13	50.8
204	7/19/2023 5:17	50.6
205	7/19/2023 5:21	50.4
206	7/19/2023 5:25	60
207	7/19/2023 5:29	55.4
208	7/19/2023 5:33	51
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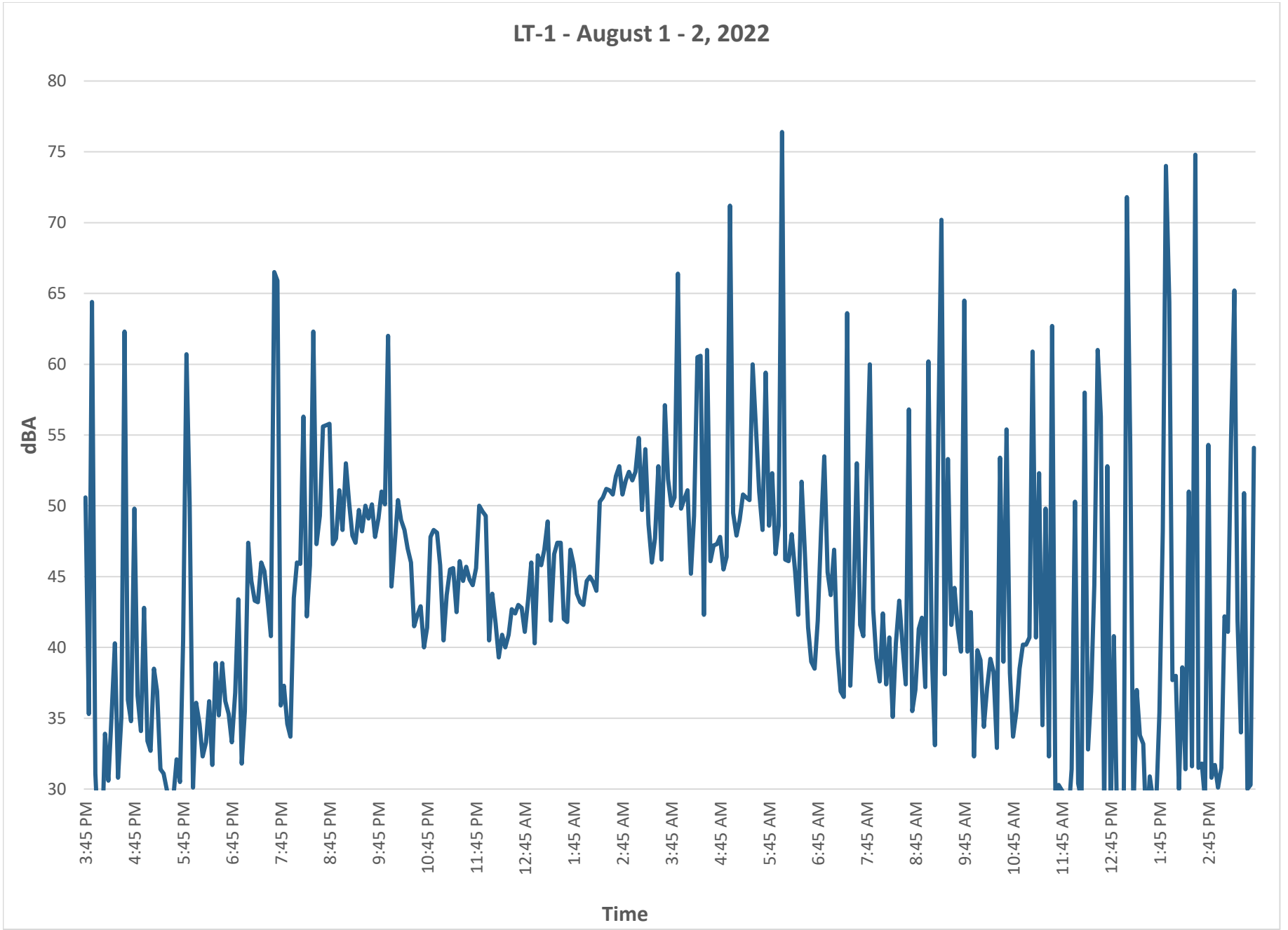
210	7/19/2023 5:41	59.4
211	7/19/2023 5:45	48.6
212	7/19/2023 5:49	52.3
213	7/19/2023 5:53	46.6
214	7/19/2023 5:57	48.6
215	7/19/2023 6:01	76.4
216	7/19/2023 6:05	46.2
217	7/19/2023 6:09	46.1
218	7/19/2023 6:13	48
219	7/19/2023 6:17	45.4
220	7/19/2023 6:21	42.3

221	7/19/2023 6:25	51.7
222	7/19/2023 6:29	46.9
223	7/19/2023 6:33	41.4
224	7/19/2023 6:37	39
225	7/19/2023 6:41	38.5
226	7/19/2023 6:45	41.9
227	7/19/2023 6:49	48.3
228	7/19/2023 6:53	53.5
229	7/19/2023 6:57	45.3
230	7/19/2023 7:01	43.7
231	7/19/2023 7:05	46.9
232	7/19/2023 7:09	39.9
233	7/19/2023 7:13	36.9
234	7/19/2023 7:17	36.5
235	7/19/2023 7:21	63.6
236	7/19/2023 7:25	37.3
237	7/19/2023 7:29	43.6
238	7/19/2023 7:33	53
239	7/19/2023 7:37	41.6
240	7/19/2023 7:41	40.8
241	7/19/2023 7:45	51.8
242	7/19/2023 7:49	60
243	7/19/2023 7:53	42.7
244	7/19/2023 7:57	39.2
245	7/19/2023 8:01	37.6
246	7/19/2023 8:05	42.4
247	7/19/2023 8:09	37.4
248	7/19/2023 8:13	40.7
249	7/19/2023 8:17	35.1
250	7/19/2023 8:21	40.3
251	7/19/2023 8:25	43.3
252	7/19/2023 8:29	40.3
253	7/19/2023 8:33	37.4
254	7/19/2023 8:37	56.8
255	7/19/2023 8:41	35.5
256	7/19/2023 8:45	37
257	7/19/2023 8:49	41.3
258	7/19/2023 8:53	42.1
259	7/19/2023 8:57	37.2
260	7/19/2023 9:01	60.2
261	7/19/2023 9:05	39.6
262	7/19/2023 9:09	33.1
263	7/19/2023 9:13	55.1
264	7/19/2023 9:17	70.2
265	7/19/2023 9:21	38.1
266	7/19/2023 9:25	53.3
267	7/19/2023 9:29	41.6

268	7/19/2023 9:33	44.2
269	7/19/2023 9:37	41.3
270	7/19/2023 9:41	39.7
271	7/19/2023 9:45	64.5
272	7/19/2023 9:49	39.7
273	7/19/2023 9:53	42.5
274	7/19/2023 9:57	32.3
275	7/19/2023 10:01	39.8
276	7/19/2023 10:05	39.1
277	7/19/2023 10:09	34.4
278	7/19/2023 10:13	37.1
279	7/19/2023 10:17	39.2
280	7/19/2023 10:21	38.3
281	7/19/2023 10:25	32.9
282	7/19/2023 10:29	53.4
283	7/19/2023 10:33	39
284	7/19/2023 10:37	55.4
285	7/19/2023 10:41	38.2
286	7/19/2023 10:45	33.7
287	7/19/2023 10:49	35.5
288	7/19/2023 10:53	38.5
289	7/19/2023 10:57	40.2
290	7/19/2023 11:01	40.2
291	7/19/2023 11:05	40.7
292	7/19/2023 11:09	60.9
293	7/19/2023 11:13	40.7
294	7/19/2023 11:17	52.3
295	7/19/2023 11:21	34.5
296	7/19/2023 11:25	49.8
297	7/19/2023 11:29	32.3
298	7/19/2023 11:33	62.7
299	7/19/2023 11:37	28.6
300	7/19/2023 11:41	30.3
301	7/19/2023 11:45	29.9
302	7/19/2023 11:49	29.6
303	7/19/2023 11:53	28.2
304	7/19/2023 11:57	31.4
305	7/19/2023 12:01	50.3
306	7/19/2023 12:05	30.4
307	7/19/2023 12:09	29.2
308	7/19/2023 12:13	58
309	7/19/2023 12:17	32.8
310	7/19/2023 12:21	36.9
311	7/19/2023 12:25	44.4
312	7/19/2023 12:29	61
313	7/19/2023 12:33	56.3
314	7/19/2023 12:37	28.2

315	7/19/2023 12:41	52.8
316	7/19/2023 12:45	28.1
317	7/19/2023 12:49	40.8
318	7/19/2023 12:53	27.1
319	7/19/2023 12:57	26.5
320	7/19/2023 13:01	28.3
321	7/19/2023 13:05	71.8
322	7/19/2023 13:09	54.3
323	7/19/2023 13:13	28.2
324	7/19/2023 13:17	37
325	7/19/2023 13:21	33.8
326	7/19/2023 13:25	33.2
327	7/19/2023 13:29	26.8
328	7/19/2023 13:33	30.9
329	7/19/2023 13:37	29.3
330	7/19/2023 13:41	29.1
331	7/19/2023 13:45	35.4
332	7/19/2023 13:49	48.2
333	7/19/2023 13:53	74
334	7/19/2023 13:57	64.4
335	7/19/2023 14:01	37.7
336	7/19/2023 14:05	38
337	7/19/2023 14:09	30
338	7/19/2023 14:13	38.6
339	7/19/2023 14:17	31.4
340	7/19/2023 14:21	51
341	7/19/2023 14:25	31.6
342	7/19/2023 14:29	74.8
343	7/19/2023 14:33	31.5
344	7/19/2023 14:37	31.8
345	7/19/2023 14:41	29.2
346	7/19/2023 14:45	54.3
347	7/19/2023 14:49	30.8
348	7/19/2023 14:53	31.7
349	7/19/2023 14:57	30.1
350	7/19/2023 15:01	31.5
351	7/19/2023 15:05	42.2
352	7/19/2023 15:09	41.1
353	7/19/2023 15:13	54.7
354	7/19/2023 15:17	65.2
355	7/19/2023 15:21	41.9
356	7/19/2023 15:25	34
357	7/19/2023 15:29	50.9
358	7/19/2023 15:33	30
359	7/19/2023 15:37	30.3
360	7/19/2023 15:41	54.1
361	7/19/2023 15:46	32.2

362	7/19/2023 15:50	31.7
363	7/19/2023 15:54	51.5
364	7/19/2023 15:58	42.7
365	7/19/2023 16:02	30
366	7/19/2023 16:06	30.1
367	7/19/2023 16:10	52.8
368	7/19/2023 16:14	44.3
369	7/19/2023 16:18	35.7
370	7/19/2023 16:22	32
371	7/19/2023 16:26	31.5
372	7/19/2023 16:30	31.1
373	7/19/2023 16:34	31.6
374	7/19/2023 16:38	35
375	7/19/2023 16:42	32.5


LT-1 - August 1 - 2, 2022
dBA
80
75
70
65
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50
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35
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3:45 PM
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7:45 AM
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9:45 AM
10:45 AM
11:45 AM
12:45 PM
1:45 PM
2:45 PM
Time

24-Hour Noise Measurement Avg Leq, CNEL, and Ldn Calculation Spreadsheet

Instructions

1. Open meter data in Excel.
2. Copy and paste values for into highlighted cells in spreadsheet.

Results	
24-hour average Leq	57.5
CNEL	64.0
Ldn	63.9

Duration (seconds) 240

No.s	Date Time	Date	Time	dB
1	7/18/2023 15:45	7/18/2023	3:45:31 PM	50.6
2	7/18/2023 15:49	7/18/2023	3:49:31 PM	35.3
3	7/18/2023 15:53	7/18/2023	3:53:31 PM	64.4
4	7/18/2023 15:57	7/18/2023	3:57:31 PM	31.1
5	7/18/2023 16:01	7/18/2023	4:01:31 PM	26.3
6	7/18/2023 16:05	7/18/2023	4:05:31 PM	25.9
7	7/18/2023 16:09	7/18/2023	4:09:31 PM	33.9
8	7/18/2023 16:13	7/18/2023	4:13:31 PM	30.6
9	7/18/2023 16:17	7/18/2023	4:17:31 PM	35.1
10	7/18/2023 16:21	7/18/2023	4:21:31 PM	40.3
11	7/18/2023 16:25	7/18/2023	4:25:31 PM	30.8
12	7/18/2023 16:29	7/18/2023	4:29:31 PM	35.1
13	7/18/2023 16:33	7/18/2023	4:33:31 PM	62.3
14	7/18/2023 16:37	7/18/2023	4:37:31 PM	36.3
15	7/18/2023 16:41	7/18/2023	4:41:31 PM	34.8
16	7/18/2023 16:45	7/18/2023	4:45:31 PM	49.8
17	7/18/2023 16:49	7/18/2023	4:49:31 PM	36.6
18	7/18/2023 16:53	7/18/2023	4:53:31 PM	34.1
19	7/18/2023 16:57	7/18/2023	4:57:31 PM	42.8
20	7/18/2023 17:01	7/18/2023	5:01:31 PM	33.4
21	7/18/2023 17:05	7/18/2023	5:05:31 PM	32.7
22	7/18/2023 17:09	7/18/2023	5:09:31 PM	38.5
23	7/18/2023 17:13	7/18/2023	5:13:31 PM	36.9
24	7/18/2023 17:17	7/18/2023	5:17:31 PM	31.4
25	7/18/2023 17:21	7/18/2023	5:21:31 PM	31.1
26	7/18/2023 17:25	7/18/2023	5:25:31 PM	29.9
27	7/18/2023 17:29	7/18/2023	5:29:31 PM	29
28	7/18/2023 17:33	7/18/2023	5:33:31 PM	29.5
29	7/18/2023 17:37	7/18/2023	5:37:31 PM	32.1
30	7/18/2023 17:41	7/18/2023	5:41:31 PM	30.5
31	7/18/2023 17:45	7/18/2023	5:45:31 PM	40.5
32	7/18/2023 17:49	7/18/2023	5:49:31 PM	60.7

33	7/18/2023 17:53	7/18/2023	5:53:31 PM	50.2
34	7/18/2023 17:57	7/18/2023	5:57:31 PM	30.1
35	7/18/2023 18:01	7/18/2023	6:01:31 PM	36.1
36	7/18/2023 18:05	7/18/2023	6:05:31 PM	34.6
37	7/18/2023 18:09	7/18/2023	6:09:31 PM	32.3
38	7/18/2023 18:13	7/18/2023	6:13:31 PM	33.3
39	7/18/2023 18:17	7/18/2023	6:17:31 PM	36.2
40	7/18/2023 18:21	7/18/2023	6:21:31 PM	31.7
41	7/18/2023 18:25	7/18/2023	6:25:31 PM	38.9
42	7/18/2023 18:29	7/18/2023	6:29:31 PM	35.2
43	7/18/2023 18:33	7/18/2023	6:33:31 PM	38.9
44	7/18/2023 18:37	7/18/2023	6:37:31 PM	36.2
45	7/18/2023 18:41	7/18/2023	6:41:31 PM	35.3
46	7/18/2023 18:45	7/18/2023	6:45:31 PM	33.3
47	7/18/2023 18:49	7/18/2023	6:49:31 PM	36.8
48	7/18/2023 18:53	7/18/2023	6:53:31 PM	43.4
49	7/18/2023 18:57	7/18/2023	6:57:31 PM	31.8
50	7/18/2023 19:01	7/18/2023	7:01:31 PM	35.5
51	7/18/2023 19:05	7/18/2023	7:05:31 PM	47.4
52	7/18/2023 19:09	7/18/2023	7:09:31 PM	44.7
53	7/18/2023 19:13	7/18/2023	7:13:31 PM	43.3
54	7/18/2023 19:17	7/18/2023	7:17:31 PM	43.2
55	7/18/2023 19:21	7/18/2023	7:21:31 PM	46
56	7/18/2023 19:25	7/18/2023	7:25:31 PM	45.4
57	7/18/2023 19:29	7/18/2023	7:29:31 PM	43.2
58	7/18/2023 19:33	7/18/2023	7:33:31 PM	40.8
59	7/18/2023 19:37	7/18/2023	7:37:31 PM	66.5
60	7/18/2023 19:41	7/18/2023	7:41:31 PM	65.9
61	7/18/2023 19:45	7/18/2023	7:45:31 PM	35.9
62	7/18/2023 19:49	7/18/2023	7:49:31 PM	37.3
63	7/18/2023 19:53	7/18/2023	7:53:31 PM	34.6
64	7/18/2023 19:57	7/18/2023	7:57:31 PM	33.7
65	7/18/2023 20:01	7/18/2023	8:01:31 PM	43.5
66	7/18/2023 20:05	7/18/2023	8:05:31 PM	46
67	7/18/2023 20:09	7/18/2023	8:09:31 PM	45.9
68	7/18/2023 20:13	7/18/2023	8:13:31 PM	56.3
69	7/18/2023 20:17	7/18/2023	8:17:31 PM	42.2
70	7/18/2023 20:21	7/18/2023	8:21:31 PM	45.8
71	7/18/2023 20:25	7/18/2023	8:25:31 PM	62.3
72	7/18/2023 20:29	7/18/2023	8:29:31 PM	47.3
73	7/18/2023 20:33	7/18/2023	8:33:31 PM	49.3
74	7/18/2023 20:37	7/18/2023	8:37:31 PM	55.6
75	7/18/2023 20:41	7/18/2023	8:41:31 PM	55.7
76	7/18/2023 20:45	7/18/2023	8:45:31 PM	55.8
77	7/18/2023 20:49	7/18/2023	8:49:31 PM	47.3
78	7/18/2023 20:53	7/18/2023	8:53:31 PM	47.7
79	7/18/2023 20:57	7/18/2023	8:57:31 PM	51.1

80	7/18/2023 21:01	7/18/2023	9:01:31 PM	48.3
81	7/18/2023 21:05	7/18/2023	9:05:31 PM	53
82	7/18/2023 21:09	7/18/2023	9:09:31 PM	50.3
83	7/18/2023 21:13	7/18/2023	9:13:31 PM	47.9
84	7/18/2023 21:17	7/18/2023	9:17:31 PM	47.4
85	7/18/2023 21:21	7/18/2023	9:21:31 PM	49.7
86	7/18/2023 21:25	7/18/2023	9:25:31 PM	48.2
87	7/18/2023 21:29	7/18/2023	9:29:31 PM	50
88	7/18/2023 21:33	7/18/2023	9:33:31 PM	49.1
89	7/18/2023 21:37	7/18/2023	9:37:31 PM	50.1
90	7/18/2023 21:41	7/18/2023	9:41:31 PM	47.8
91	7/18/2023 21:45	7/18/2023	9:45:31 PM	49.1
92	7/18/2023 21:49	7/18/2023	9:49:31 PM	51
93	7/18/2023 21:53	7/18/2023	9:53:31 PM	50.1
94	7/18/2023 21:57	7/18/2023	9:57:31 PM	62
95	7/18/2023 22:01	7/18/2023	10:01:31 PM	44.3
96	7/18/2023 22:05	7/18/2023	10:05:31 PM	47.2
97	7/18/2023 22:09	7/18/2023	10:09:31 PM	50.4
98	7/18/2023 22:13	7/18/2023	10:13:31 PM	49
99	7/18/2023 22:17	7/18/2023	10:17:31 PM	48.3
100	7/18/2023 22:21	7/18/2023	10:21:31 PM	47
101	7/18/2023 22:25	7/18/2023	10:25:31 PM	46
102	7/18/2023 22:29	7/18/2023	10:29:31 PM	41.5
103	7/18/2023 22:33	7/18/2023	10:33:31 PM	42.3
104	7/18/2023 22:37	7/18/2023	10:37:31 PM	42.9
105	7/18/2023 22:41	7/18/2023	10:41:31 PM	40
106	7/18/2023 22:45	7/18/2023	10:45:31 PM	41.4
107	7/18/2023 22:49	7/18/2023	10:49:31 PM	47.8
108	7/18/2023 22:53	7/18/2023	10:53:31 PM	48.3
109	7/18/2023 22:57	7/18/2023	10:57:31 PM	48.1
110	7/18/2023 23:01	7/18/2023	11:01:31 PM	45.8
111	7/18/2023 23:05	7/18/2023	11:05:31 PM	40.5
112	7/18/2023 23:09	7/18/2023	11:09:31 PM	43.7
113	7/18/2023 23:13	7/18/2023	11:13:31 PM	45.5
114	7/18/2023 23:17	7/18/2023	11:17:31 PM	45.6
115	7/18/2023 23:21	7/18/2023	11:21:31 PM	42.5
116	7/18/2023 23:25	7/18/2023	11:25:31 PM	46.1
117	7/18/2023 23:29	7/18/2023	11:29:31 PM	44.7
118	7/18/2023 23:33	7/18/2023	11:33:31 PM	45.7
119	7/18/2023 23:37	7/18/2023	11:37:31 PM	44.8
120	7/18/2023 23:41	7/18/2023	11:41:31 PM	44.4
121	7/18/2023 23:45	7/18/2023	11:45:31 PM	45.6
122	7/18/2023 23:49	7/18/2023	11:49:31 PM	50
123	7/18/2023 23:53	7/18/2023	11:53:31 PM	49.6
124	7/18/2023 23:57	7/18/2023	11:57:31 PM	49.3
125	7/19/2023 0:01	7/19/2023	12:01:31 AM	40.5
126	7/19/2023 0:05	7/19/2023	12:05:31 AM	43.8

127	7/19/2023 0:09	7/19/2023	12:09:31 AM	41.7
128	7/19/2023 0:13	7/19/2023	12:13:31 AM	39.3
129	7/19/2023 0:17	7/19/2023	12:17:31 AM	40.9
130	7/19/2023 0:21	7/19/2023	12:21:31 AM	40
131	7/19/2023 0:25	7/19/2023	12:25:31 AM	40.9
132	7/19/2023 0:29	7/19/2023	12:29:31 AM	42.7
133	7/19/2023 0:33	7/19/2023	12:33:31 AM	42.4
134	7/19/2023 0:37	7/19/2023	12:37:31 AM	43
135	7/19/2023 0:41	7/19/2023	12:41:31 AM	42.8
136	7/19/2023 0:45	7/19/2023	12:45:31 AM	41.1
137	7/19/2023 0:49	7/19/2023	12:49:31 AM	43.4
138	7/19/2023 0:53	7/19/2023	12:53:31 AM	46
139	7/19/2023 0:57	7/19/2023	12:57:31 AM	40.3
140	7/19/2023 1:01	7/19/2023	1:01:31 AM	46.5
141	7/19/2023 1:05	7/19/2023	1:05:31 AM	45.8
142	7/19/2023 1:09	7/19/2023	1:09:31 AM	46.9
143	7/19/2023 1:13	7/19/2023	1:13:31 AM	48.9
144	7/19/2023 1:17	7/19/2023	1:17:31 AM	41.9
145	7/19/2023 1:21	7/19/2023	1:21:31 AM	46.6
146	7/19/2023 1:25	7/19/2023	1:25:31 AM	47.4
147	7/19/2023 1:29	7/19/2023	1:29:31 AM	47.4
148	7/19/2023 1:33	7/19/2023	1:33:31 AM	42
149	7/19/2023 1:37	7/19/2023	1:37:31 AM	41.8
150	7/19/2023 1:41	7/19/2023	1:41:31 AM	46.9
151	7/19/2023 1:45	7/19/2023	1:45:31 AM	45.8
152	7/19/2023 1:49	7/19/2023	1:49:31 AM	43.8
153	7/19/2023 1:53	7/19/2023	1:53:31 AM	43.2
154	7/19/2023 1:57	7/19/2023	1:57:31 AM	43
155	7/19/2023 2:01	7/19/2023	2:01:31 AM	44.7
156	7/19/2023 2:05	7/19/2023	2:05:31 AM	45
157	7/19/2023 2:09	7/19/2023	2:09:31 AM	44.6
158	7/19/2023 2:13	7/19/2023	2:13:31 AM	44
159	7/19/2023 2:17	7/19/2023	2:17:31 AM	50.3
160	7/19/2023 2:21	7/19/2023	2:21:31 AM	50.6
161	7/19/2023 2:25	7/19/2023	2:25:31 AM	51.2
162	7/19/2023 2:29	7/19/2023	2:29:31 AM	51.1
163	7/19/2023 2:33	7/19/2023	2:33:31 AM	50.8
164	7/19/2023 2:37	7/19/2023	2:37:31 AM	52.1
165	7/19/2023 2:41	7/19/2023	2:41:31 AM	52.8
166	7/19/2023 2:45	7/19/2023	2:45:31 AM	50.8
167	7/19/2023 2:49	7/19/2023	2:49:31 AM	51.8
168	7/19/2023 2:53	7/19/2023	2:53:31 AM	52.4
169	7/19/2023 2:57	7/19/2023	2:57:31 AM	51.8
170	7/19/2023 3:01	7/19/2023	3:01:31 AM	52.4
171	7/19/2023 3:05	7/19/2023	3:05:31 AM	54.8
172	7/19/2023 3:09	7/19/2023	3:09:31 AM	49.7
173	7/19/2023 3:13	7/19/2023	3:13:31 AM	54

174	7/19/2023 3:17	7/19/2023	3:17:31 AM	48.7
175	7/19/2023 3:21	7/19/2023	3:21:31 AM	46
176	7/19/2023 3:25	7/19/2023	3:25:31 AM	47.7
177	7/19/2023 3:29	7/19/2023	3:29:31 AM	52.8
178	7/19/2023 3:33	7/19/2023	3:33:31 AM	46.2
179	7/19/2023 3:37	7/19/2023	3:37:31 AM	57.1
180	7/19/2023 3:41	7/19/2023	3:41:31 AM	51.9
181	7/19/2023 3:45	7/19/2023	3:45:31 AM	50
182	7/19/2023 3:49	7/19/2023	3:49:31 AM	50.6
183	7/19/2023 3:53	7/19/2023	3:53:31 AM	66.4
184	7/19/2023 3:57	7/19/2023	3:57:31 AM	49.8
185	7/19/2023 4:01	7/19/2023	4:01:31 AM	50.5
186	7/19/2023 4:05	7/19/2023	4:05:31 AM	51.1
187	7/19/2023 4:09	7/19/2023	4:09:31 AM	45.2
188	7/19/2023 4:13	7/19/2023	4:13:31 AM	49.3
189	7/19/2023 4:17	7/19/2023	4:17:31 AM	60.5
190	7/19/2023 4:21	7/19/2023	4:21:31 AM	60.6
191	7/19/2023 4:25	7/19/2023	4:25:31 AM	42.3
192	7/19/2023 4:29	7/19/2023	4:29:31 AM	61
193	7/19/2023 4:33	7/19/2023	4:33:31 AM	46.1
194	7/19/2023 4:37	7/19/2023	4:37:31 AM	47.2
195	7/19/2023 4:41	7/19/2023	4:41:31 AM	47.3
196	7/19/2023 4:45	7/19/2023	4:45:31 AM	47.8
197	7/19/2023 4:49	7/19/2023	4:49:31 AM	45.5
198	7/19/2023 4:53	7/19/2023	4:53:31 AM	46.4
199	7/19/2023 4:57	7/19/2023	4:57:31 AM	71.2
200	7/19/2023 5:01	7/19/2023	5:01:31 AM	49.5
201	7/19/2023 5:05	7/19/2023	5:05:31 AM	47.9
202	7/19/2023 5:09	7/19/2023	5:09:31 AM	49
203	7/19/2023 5:13	7/19/2023	5:13:31 AM	50.8
204	7/19/2023 5:17	7/19/2023	5:17:31 AM	50.6
205	7/19/2023 5:21	7/19/2023	5:21:31 AM	50.4
206	7/19/2023 5:25	7/19/2023	5:25:31 AM	60
207	7/19/2023 5:29	7/19/2023	5:29:31 AM	55.4
208	7/19/2023 5:33	7/19/2023	5:33:31 AM	51
209	7/19/2023 5:37	7/19/2023	5:37:31 AM	48.3
210	7/19/2023 5:41	7/19/2023	5:41:31 AM	59.4
211	7/19/2023 5:45	7/19/2023	5:45:31 AM	48.6
212	7/19/2023 5:49	7/19/2023	5:49:31 AM	52.3
213	7/19/2023 5:53	7/19/2023	5:53:31 AM	46.6
214	7/19/2023 5:57	7/19/2023	5:57:31 AM	48.6
215	7/19/2023 6:01	7/19/2023	6:01:31 AM	76.4
216	7/19/2023 6:05	7/19/2023	6:05:31 AM	46.2
217	7/19/2023 6:09	7/19/2023	6:09:31 AM	46.1
218	7/19/2023 6:13	7/19/2023	6:13:31 AM	48
219	7/19/2023 6:17	7/19/2023	6:17:31 AM	45.4
220	7/19/2023 6:21	7/19/2023	6:21:31 AM	42.3

221	7/19/2023 6:25	7/19/2023	6:25:31 AM	51.7
222	7/19/2023 6:29	7/19/2023	6:29:31 AM	46.9
223	7/19/2023 6:33	7/19/2023	6:33:31 AM	41.4
224	7/19/2023 6:37	7/19/2023	6:37:31 AM	39
225	7/19/2023 6:41	7/19/2023	6:41:31 AM	38.5
226	7/19/2023 6:45	7/19/2023	6:45:31 AM	41.9
227	7/19/2023 6:49	7/19/2023	6:49:31 AM	48.3
228	7/19/2023 6:53	7/19/2023	6:53:31 AM	53.5
229	7/19/2023 6:57	7/19/2023	6:57:31 AM	45.3
230	7/19/2023 7:01	7/19/2023	7:01:31 AM	43.7
231	7/19/2023 7:05	7/19/2023	7:05:31 AM	46.9
232	7/19/2023 7:09	7/19/2023	7:09:31 AM	39.9
233	7/19/2023 7:13	7/19/2023	7:13:31 AM	36.9
234	7/19/2023 7:17	7/19/2023	7:17:31 AM	36.5
235	7/19/2023 7:21	7/19/2023	7:21:31 AM	63.6
236	7/19/2023 7:25	7/19/2023	7:25:31 AM	37.3
237	7/19/2023 7:29	7/19/2023	7:29:31 AM	43.6
238	7/19/2023 7:33	7/19/2023	7:33:31 AM	53
239	7/19/2023 7:37	7/19/2023	7:37:31 AM	41.6
240	7/19/2023 7:41	7/19/2023	7:41:31 AM	40.8
241	7/19/2023 7:45	7/19/2023	7:45:31 AM	51.8
242	7/19/2023 7:49	7/19/2023	7:49:31 AM	60
243	7/19/2023 7:53	7/19/2023	7:53:31 AM	42.7
244	7/19/2023 7:57	7/19/2023	7:57:31 AM	39.2
245	7/19/2023 8:01	7/19/2023	8:01:31 AM	37.6
246	7/19/2023 8:05	7/19/2023	8:05:31 AM	42.4
247	7/19/2023 8:09	7/19/2023	8:09:31 AM	37.4
248	7/19/2023 8:13	7/19/2023	8:13:31 AM	40.7
249	7/19/2023 8:17	7/19/2023	8:17:31 AM	35.1
250	7/19/2023 8:21	7/19/2023	8:21:31 AM	40.3
251	7/19/2023 8:25	7/19/2023	8:25:31 AM	43.3
252	7/19/2023 8:29	7/19/2023	8:29:31 AM	40.3
253	7/19/2023 8:33	7/19/2023	8:33:31 AM	37.4
254	7/19/2023 8:37	7/19/2023	8:37:31 AM	56.8
255	7/19/2023 8:41	7/19/2023	8:41:31 AM	35.5
256	7/19/2023 8:45	7/19/2023	8:45:31 AM	37
257	7/19/2023 8:49	7/19/2023	8:49:31 AM	41.3
258	7/19/2023 8:53	7/19/2023	8:53:31 AM	42.1
259	7/19/2023 8:57	7/19/2023	8:57:31 AM	37.2
260	7/19/2023 9:01	7/19/2023	9:01:31 AM	60.2
261	7/19/2023 9:05	7/19/2023	9:05:31 AM	39.6
262	7/19/2023 9:09	7/19/2023	9:09:31 AM	33.1
263	7/19/2023 9:13	7/19/2023	9:13:31 AM	55.1
264	7/19/2023 9:17	7/19/2023	9:17:31 AM	70.2
265	7/19/2023 9:21	7/19/2023	9:21:31 AM	38.1
266	7/19/2023 9:25	7/19/2023	9:25:31 AM	53.3
267	7/19/2023 9:29	7/19/2023	9:29:31 AM	41.6

268	7/19/2023 9:33	7/19/2023	9:33:31 AM	44.2
269	7/19/2023 9:37	7/19/2023	9:37:31 AM	41.3
270	7/19/2023 9:41	7/19/2023	9:41:31 AM	39.7
271	7/19/2023 9:45	7/19/2023	9:45:31 AM	64.5
272	7/19/2023 9:49	7/19/2023	9:49:31 AM	39.7
273	7/19/2023 9:53	7/19/2023	9:53:31 AM	42.5
274	7/19/2023 9:57	7/19/2023	9:57:31 AM	32.3
275	7/19/2023 10:01	7/19/2023	10:01:31 AM	39.8
276	7/19/2023 10:05	7/19/2023	10:05:31 AM	39.1
277	7/19/2023 10:09	7/19/2023	10:09:31 AM	34.4
278	7/19/2023 10:13	7/19/2023	10:13:31 AM	37.1
279	7/19/2023 10:17	7/19/2023	10:17:31 AM	39.2
280	7/19/2023 10:21	7/19/2023	10:21:31 AM	38.3
281	7/19/2023 10:25	7/19/2023	10:25:31 AM	32.9
282	7/19/2023 10:29	7/19/2023	10:29:31 AM	53.4
283	7/19/2023 10:33	7/19/2023	10:33:31 AM	39
284	7/19/2023 10:37	7/19/2023	10:37:31 AM	55.4
285	7/19/2023 10:41	7/19/2023	10:41:31 AM	38.2
286	7/19/2023 10:45	7/19/2023	10:45:31 AM	33.7
287	7/19/2023 10:49	7/19/2023	10:49:31 AM	35.5
288	7/19/2023 10:53	7/19/2023	10:53:31 AM	38.5
289	7/19/2023 10:57	7/19/2023	10:57:31 AM	40.2
290	7/19/2023 11:01	7/19/2023	11:01:31 AM	40.2
291	7/19/2023 11:05	7/19/2023	11:05:31 AM	40.7
292	7/19/2023 11:09	7/19/2023	11:09:31 AM	60.9
293	7/19/2023 11:13	7/19/2023	11:13:31 AM	40.7
294	7/19/2023 11:17	7/19/2023	11:17:31 AM	52.3
295	7/19/2023 11:21	7/19/2023	11:21:31 AM	34.5
296	7/19/2023 11:25	7/19/2023	11:25:31 AM	49.8
297	7/19/2023 11:29	7/19/2023	11:29:31 AM	32.3
298	7/19/2023 11:33	7/19/2023	11:33:31 AM	62.7
299	7/19/2023 11:37	7/19/2023	11:37:31 AM	28.6
300	7/19/2023 11:41	7/19/2023	11:41:31 AM	30.3
301	7/19/2023 11:45	7/19/2023	11:45:31 AM	29.9
302	7/19/2023 11:49	7/19/2023	11:49:31 AM	29.6
303	7/19/2023 11:53	7/19/2023	11:53:31 AM	28.2
304	7/19/2023 11:57	7/19/2023	11:57:31 AM	31.4
305	7/19/2023 12:01	7/19/2023	12:01:31 PM	50.3
306	7/19/2023 12:05	7/19/2023	12:05:31 PM	30.4
307	7/19/2023 12:09	7/19/2023	12:09:31 PM	29.2
308	7/19/2023 12:13	7/19/2023	12:13:31 PM	58
309	7/19/2023 12:17	7/19/2023	12:17:31 PM	32.8
310	7/19/2023 12:21	7/19/2023	12:21:31 PM	36.9
311	7/19/2023 12:25	7/19/2023	12:25:31 PM	44.4
312	7/19/2023 12:29	7/19/2023	12:29:31 PM	61
313	7/19/2023 12:33	7/19/2023	12:33:31 PM	56.3
314	7/19/2023 12:37	7/19/2023	12:37:31 PM	28.2

315	7/19/2023 12:41	7/19/2023	12:41:31 PM	52.8
316	7/19/2023 12:45	7/19/2023	12:45:31 PM	28.1
317	7/19/2023 12:49	7/19/2023	12:49:31 PM	40.8
318	7/19/2023 12:53	7/19/2023	12:53:31 PM	27.1
319	7/19/2023 12:57	7/19/2023	12:57:31 PM	26.5
320	7/19/2023 13:01	7/19/2023	1:01:31 PM	28.3
321	7/19/2023 13:05	7/19/2023	1:05:31 PM	71.8
322	7/19/2023 13:09	7/19/2023	1:09:31 PM	54.3
323	7/19/2023 13:13	7/19/2023	1:13:31 PM	28.2
324	7/19/2023 13:17	7/19/2023	1:17:31 PM	37
325	7/19/2023 13:21	7/19/2023	1:21:31 PM	33.8
326	7/19/2023 13:25	7/19/2023	1:25:31 PM	33.2
327	7/19/2023 13:29	7/19/2023	1:29:31 PM	26.8
328	7/19/2023 13:33	7/19/2023	1:33:31 PM	30.9
329	7/19/2023 13:37	7/19/2023	1:37:31 PM	29.3
330	7/19/2023 13:41	7/19/2023	1:41:31 PM	29.1
331	7/19/2023 13:45	7/19/2023	1:45:31 PM	35.4
332	7/19/2023 13:49	7/19/2023	1:49:31 PM	48.2
333	7/19/2023 13:53	7/19/2023	1:53:31 PM	74
334	7/19/2023 13:57	7/19/2023	1:57:31 PM	64.4
335	7/19/2023 14:01	7/19/2023	2:01:31 PM	37.7
336	7/19/2023 14:05	7/19/2023	2:05:31 PM	38
337	7/19/2023 14:09	7/19/2023	2:09:31 PM	30
338	7/19/2023 14:13	7/19/2023	2:13:31 PM	38.6
339	7/19/2023 14:17	7/19/2023	2:17:31 PM	31.4
340	7/19/2023 14:21	7/19/2023	2:21:31 PM	51
341	7/19/2023 14:25	7/19/2023	2:25:31 PM	31.6
342	7/19/2023 14:29	7/19/2023	2:29:31 PM	74.8
343	7/19/2023 14:33	7/19/2023	2:33:31 PM	31.5
344	7/19/2023 14:37	7/19/2023	2:37:31 PM	31.8
345	7/19/2023 14:41	7/19/2023	2:41:31 PM	29.2
346	7/19/2023 14:45	7/19/2023	2:45:31 PM	54.3
347	7/19/2023 14:49	7/19/2023	2:49:31 PM	30.8
348	7/19/2023 14:53	7/19/2023	2:53:31 PM	31.7
349	7/19/2023 14:57	7/19/2023	2:57:31 PM	30.1
350	7/19/2023 15:01	7/19/2023	3:01:31 PM	31.5
351	7/19/2023 15:05	7/19/2023	3:05:31 PM	42.2
352	7/19/2023 15:09	7/19/2023	3:09:31 PM	41.1
353	7/19/2023 15:13	7/19/2023	3:13:31 PM	54.7
354	7/19/2023 15:17	7/19/2023	3:17:31 PM	65.2
355	7/19/2023 15:21	7/19/2023	3:21:31 PM	41.9
356	7/19/2023 15:25	7/19/2023	3:25:31 PM	34
357	7/19/2023 15:29	7/19/2023	3:29:31 PM	50.9
358	7/19/2023 15:33	7/19/2023	3:33:31 PM	30
359	7/19/2023 15:37	7/19/2023	3:37:31 PM	30.3
360	7/19/2023 15:41	7/19/2023	3:41:31 PM	54.1

Projects Site Noise Monitoring Results – Long Term

	dBA L_{eq}	Sample Time	dBA L_{eq}
LT1 – Southwestern Portion of Project Site, May 3 – 4, 2022			
5:35 p.m.	55	5:35 a.m.	58
6:35 p.m.	40	6:35 a.m.	60
7:35 p.m.	49	7:35 a.m.	65
8:35 p.m.	58	8:35 a.m.	53
9:35 p.m.	53	9:35 a.m.	51
10:35 p.m.	50	10:35 a.m.	59
11:35 p.m.	52	11:35 a.m.	54
12:35 a.m.	46	12:35 p.m.	54
1:35 a.m.	45	1:35 p.m.	52
2:35 a.m.	46	2:35 p.m.	60
3:35 a.m.	49	3:35 p.m.	66
4:35 a.m.	52	4:35 p.m.	55

No.s	Date Time	dB
1	7/18/2023 15:45	50.6
2	7/18/2023 15:49	35.3
3	7/18/2023 15:53	64.4
4	7/18/2023 15:57	31.1
5	7/18/2023 16:01	26.3
6	7/18/2023 16:05	25.9
7	7/18/2023 16:09	33.9
8	7/18/2023 16:13	30.6
9	7/18/2023 16:17	35.1
10	7/18/2023 16:21	40.3
11	7/18/2023 16:25	30.8
12	7/18/2023 16:29	35.1
13	7/18/2023 16:33	62.3
14	7/18/2023 16:37	36.3
15	7/18/2023 16:41	34.8
16	7/18/2023 16:45	49.8
17	7/18/2023 16:49	36.6
18	7/18/2023 16:53	34.1
19	7/18/2023 16:57	42.8
20	7/18/2023 17:01	33.4
21	7/18/2023 17:05	32.7
22	7/18/2023 17:09	38.5
23	7/18/2023 17:13	36.9
24	7/18/2023 17:17	31.4
25	7/18/2023 17:21	31.1
26	7/18/2023 17:25	29.9
27	7/18/2023 17:29	29
28	7/18/2023 17:33	29.5
29	7/18/2023 17:37	32.1
30	7/18/2023 17:41	30.5
31	7/18/2023 17:45	40.5
32	7/18/2023 17:49	60.7

33	7/18/2023 17:53	50.2
34	7/18/2023 17:57	30.1
35	7/18/2023 18:01	36.1
36	7/18/2023 18:05	34.6
37	7/18/2023 18:09	32.3
38	7/18/2023 18:13	33.3
39	7/18/2023 18:17	36.2
40	7/18/2023 18:21	31.7
41	7/18/2023 18:25	38.9
42	7/18/2023 18:29	35.2
43	7/18/2023 18:33	38.9
44	7/18/2023 18:37	36.2
45	7/18/2023 18:41	35.3
46	7/18/2023 18:45	33.3
47	7/18/2023 18:49	36.8
48	7/18/2023 18:53	43.4
49	7/18/2023 18:57	31.8
50	7/18/2023 19:01	35.5
51	7/18/2023 19:05	47.4
52	7/18/2023 19:09	44.7
53	7/18/2023 19:13	43.3
54	7/18/2023 19:17	43.2
55	7/18/2023 19:21	46
56	7/18/2023 19:25	45.4
57	7/18/2023 19:29	43.2
58	7/18/2023 19:33	40.8
59	7/18/2023 19:37	66.5
60	7/18/2023 19:41	65.9
61	7/18/2023 19:45	35.9
62	7/18/2023 19:49	37.3
63	7/18/2023 19:53	34.6
64	7/18/2023 19:57	33.7
65	7/18/2023 20:01	43.5
66	7/18/2023 20:05	46
67	7/18/2023 20:09	45.9
68	7/18/2023 20:13	56.3
69	7/18/2023 20:17	42.2
70	7/18/2023 20:21	45.8
71	7/18/2023 20:25	62.3
72	7/18/2023 20:29	47.3
73	7/18/2023 20:33	49.3
74	7/18/2023 20:37	55.6
75	7/18/2023 20:41	55.7
76	7/18/2023 20:45	55.8
77	7/18/2023 20:49	47.3
78	7/18/2023 20:53	47.7
79	7/18/2023 20:57	51.1

80	7/18/2023 21:01	48.3
81	7/18/2023 21:05	53
82	7/18/2023 21:09	50.3
83	7/18/2023 21:13	47.9
84	7/18/2023 21:17	47.4
85	7/18/2023 21:21	49.7
86	7/18/2023 21:25	48.2
87	7/18/2023 21:29	50
88	7/18/2023 21:33	49.1
89	7/18/2023 21:37	50.1
90	7/18/2023 21:41	47.8
91	7/18/2023 21:45	49.1
92	7/18/2023 21:49	51
93	7/18/2023 21:53	50.1
94	7/18/2023 21:57	62
95	7/18/2023 22:01	44.3
96	7/18/2023 22:05	47.2
97	7/18/2023 22:09	50.4
98	7/18/2023 22:13	49
99	7/18/2023 22:17	48.3
100	7/18/2023 22:21	47
101	7/18/2023 22:25	46
102	7/18/2023 22:29	41.5
103	7/18/2023 22:33	42.3
104	7/18/2023 22:37	42.9
105	7/18/2023 22:41	40
106	7/18/2023 22:45	41.4
107	7/18/2023 22:49	47.8
108	7/18/2023 22:53	48.3
109	7/18/2023 22:57	48.1
110	7/18/2023 23:01	45.8
111	7/18/2023 23:05	40.5
112	7/18/2023 23:09	43.7
113	7/18/2023 23:13	45.5
114	7/18/2023 23:17	45.6
115	7/18/2023 23:21	42.5
116	7/18/2023 23:25	46.1
117	7/18/2023 23:29	44.7
118	7/18/2023 23:33	45.7
119	7/18/2023 23:37	44.8
120	7/18/2023 23:41	44.4
121	7/18/2023 23:45	45.6
122	7/18/2023 23:49	50
123	7/18/2023 23:53	49.6
124	7/18/2023 23:57	49.3
125	7/19/2023 0:01	40.5
126	7/19/2023 0:05	43.8

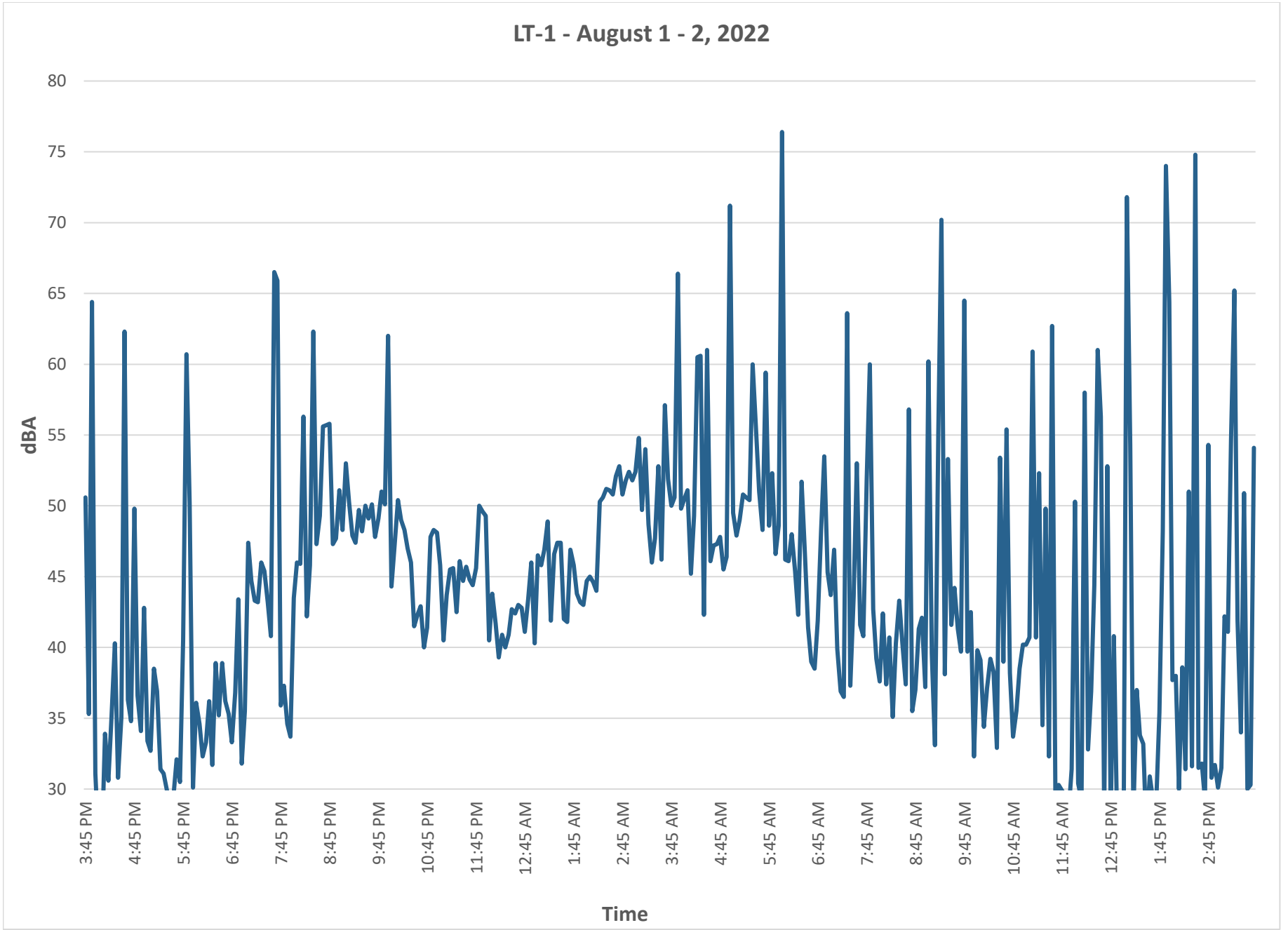
127	7/19/2023 0:09	41.7
128	7/19/2023 0:13	39.3
129	7/19/2023 0:17	40.9
130	7/19/2023 0:21	40
131	7/19/2023 0:25	40.9
132	7/19/2023 0:29	42.7
133	7/19/2023 0:33	42.4
134	7/19/2023 0:37	43
135	7/19/2023 0:41	42.8
136	7/19/2023 0:45	41.1
137	7/19/2023 0:49	43.4
138	7/19/2023 0:53	46
139	7/19/2023 0:57	40.3
140	7/19/2023 1:01	46.5
141	7/19/2023 1:05	45.8
142	7/19/2023 1:09	46.9
143	7/19/2023 1:13	48.9
144	7/19/2023 1:17	41.9
145	7/19/2023 1:21	46.6
146	7/19/2023 1:25	47.4
147	7/19/2023 1:29	47.4
148	7/19/2023 1:33	42
149	7/19/2023 1:37	41.8
150	7/19/2023 1:41	46.9
151	7/19/2023 1:45	45.8
152	7/19/2023 1:49	43.8
153	7/19/2023 1:53	43.2
154	7/19/2023 1:57	43
155	7/19/2023 2:01	44.7
156	7/19/2023 2:05	45
157	7/19/2023 2:09	44.6
158	7/19/2023 2:13	44
159	7/19/2023 2:17	50.3
160	7/19/2023 2:21	50.6
161	7/19/2023 2:25	51.2
162	7/19/2023 2:29	51.1
163	7/19/2023 2:33	50.8
164	7/19/2023 2:37	52.1
165	7/19/2023 2:41	52.8
166	7/19/2023 2:45	50.8
167	7/19/2023 2:49	51.8
168	7/19/2023 2:53	52.4
169	7/19/2023 2:57	51.8
170	7/19/2023 3:01	52.4
171	7/19/2023 3:05	54.8
172	7/19/2023 3:09	49.7
173	7/19/2023 3:13	54

174	7/19/2023 3:17	48.7
175	7/19/2023 3:21	46
176	7/19/2023 3:25	47.7
177	7/19/2023 3:29	52.8
178	7/19/2023 3:33	46.2
179	7/19/2023 3:37	57.1
180	7/19/2023 3:41	51.9
181	7/19/2023 3:45	50
182	7/19/2023 3:49	50.6
183	7/19/2023 3:53	66.4
184	7/19/2023 3:57	49.8
185	7/19/2023 4:01	50.5
186	7/19/2023 4:05	51.1
187	7/19/2023 4:09	45.2
188	7/19/2023 4:13	49.3
189	7/19/2023 4:17	60.5
190	7/19/2023 4:21	60.6
191	7/19/2023 4:25	42.3
192	7/19/2023 4:29	61
193	7/19/2023 4:33	46.1
194	7/19/2023 4:37	47.2
195	7/19/2023 4:41	47.3
196	7/19/2023 4:45	47.8
197	7/19/2023 4:49	45.5
198	7/19/2023 4:53	46.4
199	7/19/2023 4:57	71.2
200	7/19/2023 5:01	49.5
201	7/19/2023 5:05	47.9
202	7/19/2023 5:09	49
203	7/19/2023 5:13	50.8
204	7/19/2023 5:17	50.6
205	7/19/2023 5:21	50.4
206	7/19/2023 5:25	60
207	7/19/2023 5:29	55.4
208	7/19/2023 5:33	51
209	7/19/2023 5:37	48.3
210	7/19/2023 5:41	59.4
211	7/19/2023 5:45	48.6
212	7/19/2023 5:49	52.3
213	7/19/2023 5:53	46.6
214	7/19/2023 5:57	48.6
215	7/19/2023 6:01	76.4
216	7/19/2023 6:05	46.2
217	7/19/2023 6:09	46.1
218	7/19/2023 6:13	48
219	7/19/2023 6:17	45.4
220	7/19/2023 6:21	42.3

221	7/19/2023 6:25	51.7
222	7/19/2023 6:29	46.9
223	7/19/2023 6:33	41.4
224	7/19/2023 6:37	39
225	7/19/2023 6:41	38.5
226	7/19/2023 6:45	41.9
227	7/19/2023 6:49	48.3
228	7/19/2023 6:53	53.5
229	7/19/2023 6:57	45.3
230	7/19/2023 7:01	43.7
231	7/19/2023 7:05	46.9
232	7/19/2023 7:09	39.9
233	7/19/2023 7:13	36.9
234	7/19/2023 7:17	36.5
235	7/19/2023 7:21	63.6
236	7/19/2023 7:25	37.3
237	7/19/2023 7:29	43.6
238	7/19/2023 7:33	53
239	7/19/2023 7:37	41.6
240	7/19/2023 7:41	40.8
241	7/19/2023 7:45	51.8
242	7/19/2023 7:49	60
243	7/19/2023 7:53	42.7
244	7/19/2023 7:57	39.2
245	7/19/2023 8:01	37.6
246	7/19/2023 8:05	42.4
247	7/19/2023 8:09	37.4
248	7/19/2023 8:13	40.7
249	7/19/2023 8:17	35.1
250	7/19/2023 8:21	40.3
251	7/19/2023 8:25	43.3
252	7/19/2023 8:29	40.3
253	7/19/2023 8:33	37.4
254	7/19/2023 8:37	56.8
255	7/19/2023 8:41	35.5
256	7/19/2023 8:45	37
257	7/19/2023 8:49	41.3
258	7/19/2023 8:53	42.1
259	7/19/2023 8:57	37.2
260	7/19/2023 9:01	60.2
261	7/19/2023 9:05	39.6
262	7/19/2023 9:09	33.1
263	7/19/2023 9:13	55.1
264	7/19/2023 9:17	70.2
265	7/19/2023 9:21	38.1
266	7/19/2023 9:25	53.3
267	7/19/2023 9:29	41.6

268	7/19/2023 9:33	44.2
269	7/19/2023 9:37	41.3
270	7/19/2023 9:41	39.7
271	7/19/2023 9:45	64.5
272	7/19/2023 9:49	39.7
273	7/19/2023 9:53	42.5
274	7/19/2023 9:57	32.3
275	7/19/2023 10:01	39.8
276	7/19/2023 10:05	39.1
277	7/19/2023 10:09	34.4
278	7/19/2023 10:13	37.1
279	7/19/2023 10:17	39.2
280	7/19/2023 10:21	38.3
281	7/19/2023 10:25	32.9
282	7/19/2023 10:29	53.4
283	7/19/2023 10:33	39
284	7/19/2023 10:37	55.4
285	7/19/2023 10:41	38.2
286	7/19/2023 10:45	33.7
287	7/19/2023 10:49	35.5
288	7/19/2023 10:53	38.5
289	7/19/2023 10:57	40.2
290	7/19/2023 11:01	40.2
291	7/19/2023 11:05	40.7
292	7/19/2023 11:09	60.9
293	7/19/2023 11:13	40.7
294	7/19/2023 11:17	52.3
295	7/19/2023 11:21	34.5
296	7/19/2023 11:25	49.8
297	7/19/2023 11:29	32.3
298	7/19/2023 11:33	62.7
299	7/19/2023 11:37	28.6
300	7/19/2023 11:41	30.3
301	7/19/2023 11:45	29.9
302	7/19/2023 11:49	29.6
303	7/19/2023 11:53	28.2
304	7/19/2023 11:57	31.4
305	7/19/2023 12:01	50.3
306	7/19/2023 12:05	30.4
307	7/19/2023 12:09	29.2
308	7/19/2023 12:13	58
309	7/19/2023 12:17	32.8
310	7/19/2023 12:21	36.9
311	7/19/2023 12:25	44.4
312	7/19/2023 12:29	61
313	7/19/2023 12:33	56.3
314	7/19/2023 12:37	28.2

315	7/19/2023 12:41	52.8
316	7/19/2023 12:45	28.1
317	7/19/2023 12:49	40.8
318	7/19/2023 12:53	27.1
319	7/19/2023 12:57	26.5
320	7/19/2023 13:01	28.3
321	7/19/2023 13:05	71.8
322	7/19/2023 13:09	54.3
323	7/19/2023 13:13	28.2
324	7/19/2023 13:17	37
325	7/19/2023 13:21	33.8
326	7/19/2023 13:25	33.2
327	7/19/2023 13:29	26.8
328	7/19/2023 13:33	30.9
329	7/19/2023 13:37	29.3
330	7/19/2023 13:41	29.1
331	7/19/2023 13:45	35.4
332	7/19/2023 13:49	48.2
333	7/19/2023 13:53	74
334	7/19/2023 13:57	64.4
335	7/19/2023 14:01	37.7
336	7/19/2023 14:05	38
337	7/19/2023 14:09	30
338	7/19/2023 14:13	38.6
339	7/19/2023 14:17	31.4
340	7/19/2023 14:21	51
341	7/19/2023 14:25	31.6
342	7/19/2023 14:29	74.8
343	7/19/2023 14:33	31.5
344	7/19/2023 14:37	31.8
345	7/19/2023 14:41	29.2
346	7/19/2023 14:45	54.3
347	7/19/2023 14:49	30.8
348	7/19/2023 14:53	31.7
349	7/19/2023 14:57	30.1
350	7/19/2023 15:01	31.5
351	7/19/2023 15:05	42.2
352	7/19/2023 15:09	41.1
353	7/19/2023 15:13	54.7
354	7/19/2023 15:17	65.2
355	7/19/2023 15:21	41.9
356	7/19/2023 15:25	34
357	7/19/2023 15:29	50.9
358	7/19/2023 15:33	30
359	7/19/2023 15:37	30.3
360	7/19/2023 15:41	54.1


LT-1 - August 1 - 2, 2022
dBA
80
75
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3:45 PM
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1:45 PM
2:45 PM
Time

25-Hour Noise Measurement Avg Leq, CNEL, and Ldn Calculation Spreadsheet

Instructions

1. Open meter data in Excel.
2. Copy and paste values for into highlighted cells in spreadsheet.

Results	
24-hour average Leq	64.1
CNEL	64.1
Ldn	64.1

Duration (seconds) 240

No.s	Date Time	Date	Time	dB
1	7/19/2023 15:46	7/19/2023	3:46:01 PM	32.2
2	7/19/2023 15:50	7/19/2023	3:50:01 PM	31.7
3	7/19/2023 15:54	7/19/2023	3:54:01 PM	51.5
4	7/19/2023 15:58	7/19/2023	3:58:01 PM	42.7
5	7/19/2023 16:02	7/19/2023	4:02:01 PM	30
6	7/19/2023 16:06	7/19/2023	4:06:01 PM	30.1
7	7/19/2023 16:10	7/19/2023	4:10:01 PM	52.8
8	7/19/2023 16:14	7/19/2023	4:14:01 PM	44.3
9	7/19/2023 16:18	7/19/2023	4:18:01 PM	35.7
10	7/19/2023 16:22	7/19/2023	4:22:01 PM	32
11	7/19/2023 16:26	7/19/2023	4:26:01 PM	31.5
12	7/19/2023 16:30	7/19/2023	4:30:01 PM	31.1
13	7/19/2023 16:34	7/19/2023	4:34:01 PM	31.6
14	7/19/2023 16:38	7/19/2023	4:38:01 PM	35
15	7/19/2023 16:42	7/19/2023	4:42:01 PM	32.5
16	6/14/2023 7:04	6/14/2023	7:04:18 AM	52.5
17	6/14/2023 7:04	6/14/2023	7:04:33 AM	53.3
18	6/14/2023 7:04	6/14/2023	7:04:48 AM	52.9
19	6/14/2023 7:05	6/14/2023	7:05:03 AM	51.2
20	6/14/2023 7:05	6/14/2023	7:05:18 AM	52.4
21	6/14/2023 7:05	6/14/2023	7:05:33 AM	52.5
22	6/14/2023 7:05	6/14/2023	7:05:48 AM	53
23	6/14/2023 7:06	6/14/2023	7:06:03 AM	60
24	6/14/2023 7:06	6/14/2023	7:06:18 AM	53.3
25	6/14/2023 7:06	6/14/2023	7:06:33 AM	51.6
26	6/14/2023 7:06	6/14/2023	7:06:48 AM	53.5
27	6/14/2023 7:07	6/14/2023	7:07:03 AM	51.2
28	6/14/2023 7:07	6/14/2023	7:07:18 AM	50.9
29	6/14/2023 7:07	6/14/2023	7:07:33 AM	51.2
30	6/14/2023 7:07	6/14/2023	7:07:48 AM	51.6
31	6/14/2023 7:08	6/14/2023	7:08:03 AM	50.8
32	6/14/2023 7:08	6/14/2023	7:08:18 AM	53.3

33	6/14/2023 7:08	6/14/2023	7:08:33 AM	53.1
34	6/14/2023 7:08	6/14/2023	7:08:48 AM	54.9
35	6/14/2023 7:09	6/14/2023	7:09:03 AM	50.5
36	6/14/2023 7:09	6/14/2023	7:09:18 AM	51.9
37	6/14/2023 7:09	6/14/2023	7:09:33 AM	51.9
38	6/14/2023 7:09	6/14/2023	7:09:48 AM	52.8
39	6/14/2023 7:10	6/14/2023	7:10:03 AM	52.9
40	6/14/2023 7:10	6/14/2023	7:10:18 AM	51.7
41	6/14/2023 7:10	6/14/2023	7:10:33 AM	52.3
42	6/14/2023 7:10	6/14/2023	7:10:48 AM	51.6
43	6/14/2023 7:11	6/14/2023	7:11:03 AM	51.7
44	6/14/2023 7:11	6/14/2023	7:11:18 AM	51
45	6/14/2023 7:11	6/14/2023	7:11:33 AM	51.2
46	6/14/2023 7:11	6/14/2023	7:11:48 AM	52.5
47	6/14/2023 7:12	6/14/2023	7:12:03 AM	54
48	6/14/2023 7:12	6/14/2023	7:12:18 AM	51.2
49	6/14/2023 7:12	6/14/2023	7:12:33 AM	51.3
50	6/14/2023 7:12	6/14/2023	7:12:48 AM	50.6
51	6/14/2023 7:13	6/14/2023	7:13:03 AM	57
52	6/14/2023 7:13	6/14/2023	7:13:18 AM	51.5
53	6/14/2023 7:13	6/14/2023	7:13:33 AM	50.5
54	6/14/2023 7:13	6/14/2023	7:13:48 AM	50.2
55	6/14/2023 7:14	6/14/2023	7:14:03 AM	49.4
56	6/14/2023 7:14	6/14/2023	7:14:18 AM	49.4
57	6/14/2023 7:14	6/14/2023	7:14:33 AM	51.3
58	6/14/2023 7:14	6/14/2023	7:14:48 AM	53.8
59	6/14/2023 7:15	6/14/2023	7:15:03 AM	51.4
60	6/14/2023 7:15	6/14/2023	7:15:18 AM	51.3
61	6/14/2023 7:15	6/14/2023	7:15:33 AM	49
62	6/14/2023 7:15	6/14/2023	7:15:48 AM	52
63	6/14/2023 7:16	6/14/2023	7:16:03 AM	49.7
64	6/14/2023 7:16	6/14/2023	7:16:18 AM	49.4
65	6/14/2023 7:16	6/14/2023	7:16:33 AM	48.3
66	6/14/2023 7:16	6/14/2023	7:16:48 AM	47.9
67	6/14/2023 7:17	6/14/2023	7:17:03 AM	47.5
68	6/14/2023 7:17	6/14/2023	7:17:18 AM	48.5
69	6/14/2023 7:17	6/14/2023	7:17:33 AM	51.6
70	6/14/2023 7:17	6/14/2023	7:17:48 AM	54.4
71	6/14/2023 7:18	6/14/2023	7:18:03 AM	52.8
72	6/14/2023 7:18	6/14/2023	7:18:18 AM	50.3
73	6/14/2023 7:18	6/14/2023	7:18:33 AM	51.5
74	6/14/2023 7:18	6/14/2023	7:18:48 AM	50.4
75	6/14/2023 7:19	6/14/2023	7:19:03 AM	49.1
76	6/14/2023 7:19	6/14/2023	7:19:18 AM	55.6
77	6/14/2023 7:19	6/14/2023	7:19:33 AM	52.3
78	6/14/2023 7:19	6/14/2023	7:19:48 AM	54.1
79	6/14/2023 7:20	6/14/2023	7:20:03 AM	55.9

80	6/14/2023 7:20	6/14/2023	7:20:18 AM	64
81	6/14/2023 7:20	6/14/2023	7:20:33 AM	67.4
82	6/14/2023 7:20	6/14/2023	7:20:48 AM	85.6
83	6/14/2023 7:21	6/14/2023	7:21:03 AM	70.7
84	6/14/2023 7:21	6/14/2023	7:21:18 AM	59.3
85	6/14/2023 7:21	6/14/2023	7:21:33 AM	60.3
86	6/14/2023 7:21	6/14/2023	7:21:48 AM	60.3
87	6/14/2023 7:22	6/14/2023	7:22:03 AM	60.7
88	6/14/2023 7:22	6/14/2023	7:22:18 AM	60.5
89	6/14/2023 7:22	6/14/2023	7:22:33 AM	60.8
90	6/14/2023 7:22	6/14/2023	7:22:48 AM	60.5
91	6/14/2023 7:23	6/14/2023	7:23:03 AM	68.4
92	6/14/2023 7:23	6/14/2023	7:23:18 AM	60.2
93	6/14/2023 7:23	6/14/2023	7:23:33 AM	60.4
94	6/14/2023 7:23	6/14/2023	7:23:48 AM	60.1
95	6/14/2023 7:24	6/14/2023	7:24:03 AM	60
96	6/14/2023 7:24	6/14/2023	7:24:18 AM	59.9
97	6/14/2023 7:24	6/14/2023	7:24:33 AM	60
98	6/14/2023 7:24	6/14/2023	7:24:48 AM	59.9
99	6/14/2023 7:25	6/14/2023	7:25:03 AM	60.1
100	6/14/2023 7:25	6/14/2023	7:25:18 AM	59.9
101	6/14/2023 7:25	6/14/2023	7:25:33 AM	62.1
102	6/14/2023 7:25	6/14/2023	7:25:48 AM	60
103	6/14/2023 7:26	6/14/2023	7:26:03 AM	69.5
104	6/14/2023 7:26	6/14/2023	7:26:18 AM	59.7
105	6/14/2023 7:26	6/14/2023	7:26:33 AM	59.9
106	6/14/2023 7:26	6/14/2023	7:26:48 AM	59.7
107	6/14/2023 7:27	6/14/2023	7:27:03 AM	59.7
108	6/14/2023 7:27	6/14/2023	7:27:18 AM	59.7
109	6/14/2023 7:27	6/14/2023	7:27:33 AM	60
110	6/14/2023 7:27	6/14/2023	7:27:48 AM	59.5
111	6/14/2023 7:28	6/14/2023	7:28:03 AM	59.6
112	6/14/2023 7:28	6/14/2023	7:28:18 AM	67
113	6/14/2023 7:28	6/14/2023	7:28:33 AM	59.7
114	6/14/2023 7:28	6/14/2023	7:28:48 AM	59.9
115	6/14/2023 7:29	6/14/2023	7:29:03 AM	59.8
116	6/14/2023 7:29	6/14/2023	7:29:18 AM	59.8
117	6/14/2023 7:29	6/14/2023	7:29:33 AM	59.9
118	6/14/2023 7:29	6/14/2023	7:29:48 AM	60.2
119	6/14/2023 7:30	6/14/2023	7:30:03 AM	59.9
120	6/14/2023 7:30	6/14/2023	7:30:18 AM	60.1
121	6/14/2023 7:30	6/14/2023	7:30:33 AM	59.9
122	6/14/2023 7:30	6/14/2023	7:30:48 AM	62.3
123	6/14/2023 7:31	6/14/2023	7:31:03 AM	60.2
124	6/14/2023 7:31	6/14/2023	7:31:18 AM	61.2
125	6/14/2023 7:31	6/14/2023	7:31:33 AM	59.9
126	6/14/2023 7:31	6/14/2023	7:31:48 AM	65.5

127	6/14/2023 7:32	6/14/2023	7:32:03 AM	59.9
128	6/14/2023 7:32	6/14/2023	7:32:18 AM	59.7
129	6/14/2023 7:32	6/14/2023	7:32:33 AM	60.1
130	6/14/2023 7:32	6/14/2023	7:32:48 AM	59.7
131	6/14/2023 7:33	6/14/2023	7:33:03 AM	61.6
132	6/14/2023 7:33	6/14/2023	7:33:18 AM	60.8
133	6/14/2023 7:33	6/14/2023	7:33:33 AM	61.8
134	6/14/2023 7:33	6/14/2023	7:33:48 AM	61.9
135	6/14/2023 7:34	6/14/2023	7:34:03 AM	61.5
136	6/14/2023 7:34	6/14/2023	7:34:18 AM	61.8
137	6/14/2023 7:34	6/14/2023	7:34:33 AM	65.8
138	6/14/2023 7:34	6/14/2023	7:34:48 AM	64.6
139	6/14/2023 7:35	6/14/2023	7:35:03 AM	61.4
140	6/14/2023 7:35	6/14/2023	7:35:18 AM	60.7
141	6/14/2023 7:35	6/14/2023	7:35:33 AM	59.7
142	6/14/2023 7:35	6/14/2023	7:35:48 AM	61.2
143	6/14/2023 7:36	6/14/2023	7:36:03 AM	59.8
144	6/14/2023 7:36	6/14/2023	7:36:18 AM	62.9
145	6/14/2023 7:36	6/14/2023	7:36:33 AM	60.4
146	6/14/2023 7:36	6/14/2023	7:36:48 AM	59.8
147	6/14/2023 7:37	6/14/2023	7:37:03 AM	59.8
148	6/14/2023 7:37	6/14/2023	7:37:18 AM	59.5
149	6/14/2023 7:37	6/14/2023	7:37:33 AM	59.7
150	6/14/2023 7:37	6/14/2023	7:37:48 AM	59.7
151	6/14/2023 7:38	6/14/2023	7:38:03 AM	59.8
152	6/14/2023 7:38	6/14/2023	7:38:18 AM	59.8
153	6/14/2023 7:38	6/14/2023	7:38:33 AM	60.6
154	6/14/2023 7:38	6/14/2023	7:38:48 AM	59.8
155	6/14/2023 7:39	6/14/2023	7:39:03 AM	61.9
156	6/14/2023 7:39	6/14/2023	7:39:18 AM	61
157	6/14/2023 7:39	6/14/2023	7:39:33 AM	59.7
158	6/14/2023 7:39	6/14/2023	7:39:48 AM	60.1
159	6/14/2023 7:40	6/14/2023	7:40:03 AM	60
160	6/14/2023 7:40	6/14/2023	7:40:18 AM	59.8
161	6/14/2023 7:40	6/14/2023	7:40:33 AM	60.7
162	6/14/2023 7:40	6/14/2023	7:40:48 AM	59.8
163	6/14/2023 7:41	6/14/2023	7:41:03 AM	59.9
164	6/14/2023 7:41	6/14/2023	7:41:18 AM	60.4
165	6/14/2023 7:41	6/14/2023	7:41:33 AM	59.6
166	6/14/2023 7:41	6/14/2023	7:41:48 AM	60.8
167	6/14/2023 7:42	6/14/2023	7:42:03 AM	60
168	6/14/2023 7:42	6/14/2023	7:42:18 AM	60.1
169	6/14/2023 7:42	6/14/2023	7:42:33 AM	63.4
170	6/14/2023 7:42	6/14/2023	7:42:48 AM	59.5
171	6/14/2023 7:43	6/14/2023	7:43:03 AM	59.7
172	6/14/2023 7:43	6/14/2023	7:43:18 AM	59.7
173	6/14/2023 7:43	6/14/2023	7:43:33 AM	59.7

174	6/14/2023 7:43	6/14/2023	7:43:48 AM	59.8
175	6/14/2023 7:44	6/14/2023	7:44:03 AM	59.7
176	6/14/2023 7:44	6/14/2023	7:44:18 AM	59.6
177	6/14/2023 7:44	6/14/2023	7:44:33 AM	60
178	6/14/2023 7:44	6/14/2023	7:44:48 AM	59.8
179	6/14/2023 7:45	6/14/2023	7:45:03 AM	59.8
180	6/14/2023 7:45	6/14/2023	7:45:18 AM	64.8
181	6/14/2023 7:45	6/14/2023	7:45:33 AM	59.9
182	6/14/2023 7:45	6/14/2023	7:45:48 AM	70.4
183	6/14/2023 7:46	6/14/2023	7:46:03 AM	59.9
184	6/14/2023 7:46	6/14/2023	7:46:18 AM	60
185	6/14/2023 7:46	6/14/2023	7:46:33 AM	60
186	6/14/2023 7:46	6/14/2023	7:46:48 AM	59.7
187	6/14/2023 7:47	6/14/2023	7:47:03 AM	59.5
188	6/14/2023 7:47	6/14/2023	7:47:18 AM	59.7
189	6/14/2023 7:47	6/14/2023	7:47:33 AM	59.7
190	6/14/2023 7:47	6/14/2023	7:47:48 AM	59.9
191	6/14/2023 7:48	6/14/2023	7:48:03 AM	59.6
192	6/14/2023 7:48	6/14/2023	7:48:18 AM	59.7
193	6/14/2023 7:48	6/14/2023	7:48:33 AM	67.7
194	6/14/2023 7:48	6/14/2023	7:48:48 AM	59.6
195	6/14/2023 7:49	6/14/2023	7:49:03 AM	59.7
196	6/14/2023 7:49	6/14/2023	7:49:18 AM	59.5
197	6/14/2023 7:49	6/14/2023	7:49:33 AM	59.7
198	6/14/2023 7:49	6/14/2023	7:49:48 AM	59.6
199	6/14/2023 7:50	6/14/2023	7:50:03 AM	57
200	6/14/2023 7:50	6/14/2023	7:50:18 AM	57
201	6/14/2023 7:50	6/14/2023	7:50:33 AM	58
202	6/14/2023 7:50	6/14/2023	7:50:48 AM	57.2
203	6/14/2023 7:51	6/14/2023	7:51:03 AM	57.2
204	6/14/2023 7:51	6/14/2023	7:51:18 AM	65.6
205	6/14/2023 7:51	6/14/2023	7:51:33 AM	57.3
206	6/14/2023 7:51	6/14/2023	7:51:48 AM	57.4
207	6/14/2023 7:52	6/14/2023	7:52:03 AM	57.4
208	6/14/2023 7:52	6/14/2023	7:52:18 AM	57.2
209	6/14/2023 7:52	6/14/2023	7:52:33 AM	59.3
210	6/14/2023 7:52	6/14/2023	7:52:48 AM	57.9
211	6/14/2023 7:53	6/14/2023	7:53:03 AM	57
212	6/14/2023 7:53	6/14/2023	7:53:18 AM	59.6
213	6/14/2023 7:53	6/14/2023	7:53:33 AM	59.7
214	6/14/2023 7:53	6/14/2023	7:53:48 AM	59.7
215	6/14/2023 7:54	6/14/2023	7:54:03 AM	64.5
216	6/14/2023 7:54	6/14/2023	7:54:18 AM	68.2
217	6/14/2023 7:54	6/14/2023	7:54:33 AM	74
218	6/14/2023 7:54	6/14/2023	7:54:48 AM	62.3
219	6/14/2023 7:55	6/14/2023	7:55:03 AM	52
220	6/14/2023 7:55	6/14/2023	7:55:18 AM	53.2

221	6/14/2023 7:55	6/14/2023	7:55:33 AM	51.2
222	6/14/2023 7:55	6/14/2023	7:55:48 AM	52.6
223	6/14/2023 7:56	6/14/2023	7:56:03 AM	59.1
224	6/14/2023 7:56	6/14/2023	7:56:18 AM	52.4
225	6/14/2023 7:56	6/14/2023	7:56:33 AM	52.6
226	6/14/2023 7:56	6/14/2023	7:56:48 AM	50.9
227	6/14/2023 7:57	6/14/2023	7:57:03 AM	52.3
228	6/14/2023 7:57	6/14/2023	7:57:18 AM	56.5
229	6/14/2023 7:57	6/14/2023	7:57:33 AM	55.3
230	6/14/2023 7:57	6/14/2023	7:57:48 AM	53.7
231	6/14/2023 7:58	6/14/2023	7:58:03 AM	51.6
232	6/14/2023 7:58	6/14/2023	7:58:18 AM	51.9
233	6/14/2023 7:58	6/14/2023	7:58:33 AM	55.2
234	6/14/2023 7:58	6/14/2023	7:58:48 AM	54.9
235	6/14/2023 7:59	6/14/2023	7:59:03 AM	51.7
236	6/14/2023 7:59	6/14/2023	7:59:18 AM	53.1
237	6/14/2023 7:59	6/14/2023	7:59:33 AM	52.2
238	6/14/2023 7:59	6/14/2023	7:59:48 AM	55.2
239	6/14/2023 8:00	6/14/2023	8:00:03 AM	53.6
240	6/14/2023 8:00	6/14/2023	8:00:18 AM	54.9
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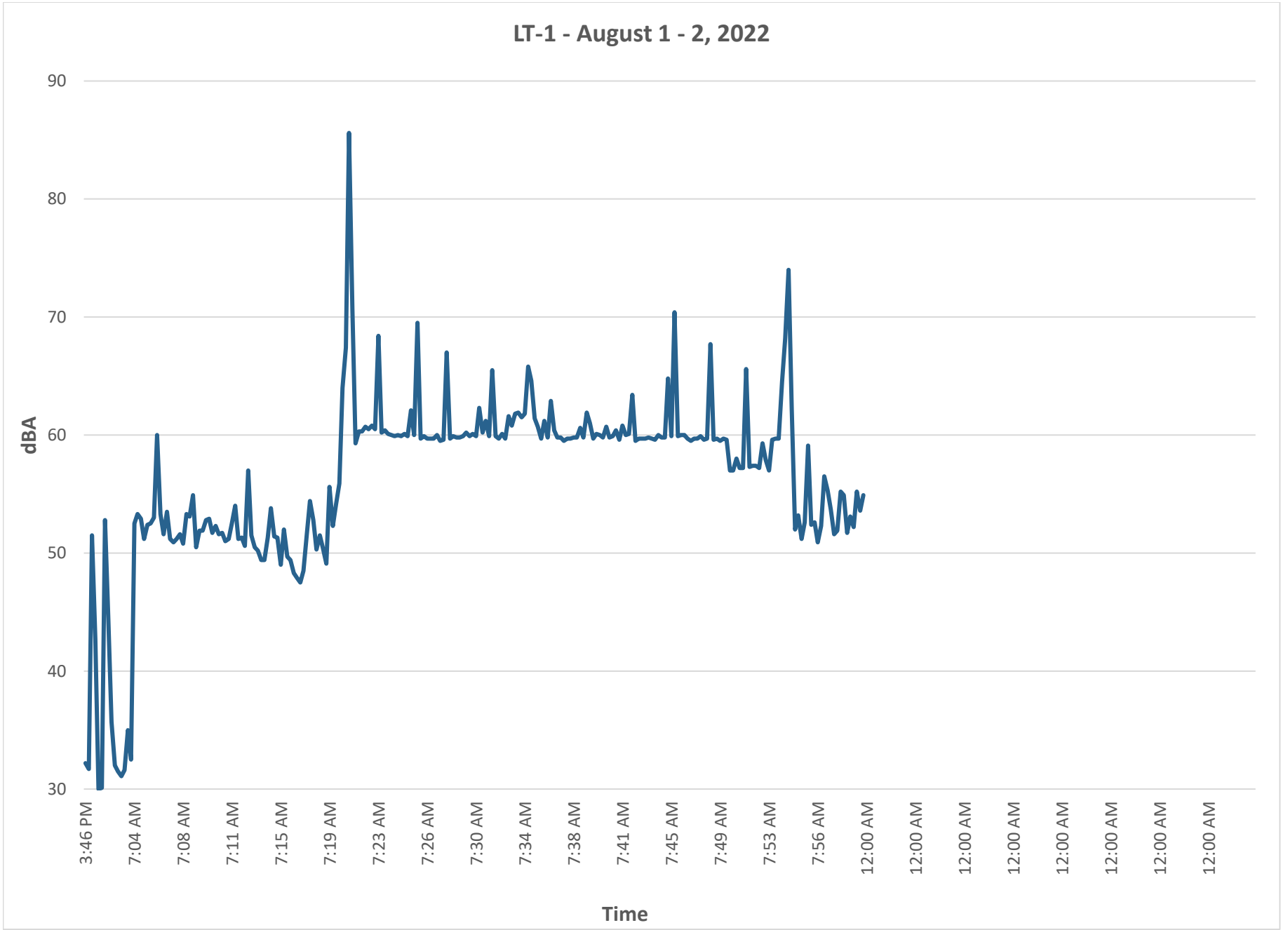
Projects Site Noise Monitoring Results – Long Term

	dBA L_{eq}	Sample Time	dBA L_{eq}
LT1 – Southwestern Portion of Project Site, May 3 – 4, 2022			
5:35 p.m.	44	5:35 a.m.	63
6:35 p.m.	54	6:35 a.m.	59
7:35 p.m.	52	7:35 a.m.	64
8:35 p.m.	52	8:35 a.m.	54
9:35 p.m.	51	9:35 a.m.	#DIV/0!
10:35 p.m.	74	10:35 a.m.	#DIV/0!
11:35 p.m.	63	11:35 a.m.	#DIV/0!
12:35 a.m.	61	12:35 p.m.	#DIV/0!
1:35 a.m.	61	1:35 p.m.	#DIV/0!
2:35 a.m.	62	2:35 p.m.	#DIV/0!
3:35 a.m.	60	3:35 p.m.	#DIV/0!
4:35 a.m.	61	4:35 p.m.	#DIV/0!

No.s	Date Time	dB
1	7/19/2023 15:46	32.2
2	7/19/2023 15:50	31.7
3	7/19/2023 15:54	51.5
4	7/19/2023 15:58	42.7
5	7/19/2023 16:02	30
6	7/19/2023 16:06	30.1
7	7/19/2023 16:10	52.8
8	7/19/2023 16:14	44.3
9	7/19/2023 16:18	35.7
10	7/19/2023 16:22	32
11	7/19/2023 16:26	31.5
12	7/19/2023 16:30	31.1
13	7/19/2023 16:34	31.6
14	7/19/2023 16:38	35
15	7/19/2023 16:42	32.5


LT-1 - August 1 - 2, 2022
90
80
70
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40
30
dBA
3:46 PM
7:04 AM
7:08 AM
7:11 AM
7:15 AM
7:19 AM
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Appendix J-2

Roadway Construction Noise Model (RCNM) Results

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 9/11/2023
Case Descr BESS_18months Option 1

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
W MT Whit	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	7415	0
Crane	No	16		80.6	7415	0
Excavator	No	40		80.7	7415	0
Backhoe	No	40		77.6	7415	0
Tractor	No	40	84		7415	0

Results

Equipment	Calculated (dBA) *Lmax	Leq	Day Lmax	Noise Limits (dBA) Day Leq	Evening Lmax	Evening Leq	Night Lmax
Front End Loader	35.7	31.7	N/A	N/A	N/A	N/A	N/A
Crane	37.1	29.2	N/A	N/A	N/A	N/A	N/A
Excavator	37.3	33.3	N/A	N/A	N/A	N/A	N/A
Backhoe	34.1	30.2	N/A	N/A	N/A	N/A	N/A
Tractor	40.6	36.6	N/A	N/A	N/A	N/A	N/A
Total	40.6	40	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Reference	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	50	0
Crane	No	16		80.6	50	0
Excavator	No	40		80.7	50	0
Backhoe	No	40		77.6	50	0
Tractor	No	40	84		50	0

	Results						
	Calculated (dBA)		Noise Limits (dBA)				
			Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A
Total	84	83.4	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

		Noise Limit Exceedance (dBA)				
	Day		Evening		Night	
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

		Noise Limit Exceedance (dBA)				
	Day		Evening		Night	
Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 9/11/2023
Case Descri BESS_18months Option 2

---- Receptor #1 ----

Descriptior	Land Use	Baselines (dBA) Daytime	Evening	Night
West Cerin	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	2920	0
Crane	No	16		80.6	2290	0
Excavator	No	40		80.7	2290	0
Backhoe	No	40		77.6	2290	0
Tractor	No	40	84		2290	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader	43.8	39.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	47.3	39.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	47.5	43.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	44.3	40.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	50.8	46.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	50.8	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Descriptior	Land Use	Baselines (dBA) Daytime	Evening	Night
Reference	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	50	0
Crane	No	16		80.6	50	0
Excavator	No	40		80.7	50	0
Backhoe	No	40		77.6	50	0
Tractor	No	40	84		50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84	83.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 9/11/2023
Case Descr BESS_36months Option 1

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
South Napa	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	7415	0
Excavator	No	40		80.7	7415	0
Tractor	No	40	84		7415	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader	35.7	31.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	37.3	33.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	40.6	36.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	40.6	39.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Reference	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	50	0
Excavator	No	40		80.7	50	0
Tractor	No	40	84		50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 9/11/2023
Case Descri BESS_36months Option 2

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
West Cerin	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	2290	0
Excavator	No	40		80.7	2290	0
Tractor	No	40	84		2290	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader	45.9	41.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	47.5	43.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	50.8	46.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	50.8	49.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Reference	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Front End Loader	No	40		79.1	50	0
Excavator	No	40		80.7	50	0
Tractor	No	40	84		50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 7/28/2023
Case Descr Darden Solar_Gen-Tie_24months

---- Receptor #1 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
W Mt Whit	Residential	80	70	70

			Equipment				
			Spec	Actual	Receptor	Estimated	
	Impact		Lmax	Lmax	Distance	Shielding	
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)	
Crane	No	16		80.6	4300	0	
Man Lift	No	20		74.7	4300	0	
Front End Loader	No	40		79.1	4300	0	
Welder / Torch	No	40		74	4300	0	
Front End Loader	No	40		79.1	4300	0	

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	41.9	33.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	36	29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	40.4	36.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	35.3	31.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	40.4	36.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	41.9	41.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
W Harlan A	Commercial	85	85	85

			Equipment				
			Spec	Actual	Receptor	Estimated	
	Impact		Lmax	Lmax	Distance	Shielding	
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)	
Crane	No	16		80.6	2890	0	
Man Lift	No	20		74.7	2890	0	
Front End Loader	No	40		79.1	2890	0	
Welder / Torch	No	40		74	2890	0	
Front End Loader	No	40		79.1	2890	0	

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	45.3	37.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	39.5	32.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	43.9	39.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	38.8	34.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	43.9	39.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	45.3	44.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Reference	Residential	80	70	70

			Equipment				
			Spec	Actual	Receptor	Estimated	
	Impact		Lmax	Lmax	Distance	Shielding	
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)	
Crane	No	16		80.6	50	0	
Man Lift	No	20		74.7	50	0	
Front End Loader	No	40		79.1	50	0	
Welder / Torch	No	40		74	50	0	
Front End Loader	No	40		79.1	50	0	

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	74.7	67.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	74	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.6	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 7/28/2023
Case Descr Darden Solar_Gen-Tie

---- Receptor #1 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
W Mt Whit	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	4300	0
Man Lift	No	20		74.7	4300	0
Front End Loader	No	40		79.1	4300	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	41.9	33.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	36	29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	40.4	36.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	41.9	38.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
W Harlan A	Commercial	85	85	85

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	2890	0
Man Lift	No	20		74.7	2890	0
Front End Loader	No	40		79.1	2890	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	45.3	37.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	39.5	32.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	43.9	39.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	45.3	42.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Reference	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	50	0
Man Lift	No	20		74.7	50	0
Front End Loader	No	40		79.1	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	74.7	67.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.6	77.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 9/11/2023
Case Descr Green Hydrogen Facility_18months Option 1

---- Receptor #1 ----

	Baselines (dBA)		
Descriptior Land Use	Daytime	Evening	Night
South Sonc Residential	80	70	70

			Equipment Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dozer	No	40		81.7	5110	0
Backhoe	No	40		77.6	5110	0
Auger Drill Rig	No	20		84.4	5110	0
Grader	No	40	85		5110	0
Tractor	No	40	84		5110	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	41.5	37.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	37.4	33.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	44.2	37.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	44.8	40.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	43.8	39.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	44.8	45.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

	Baselines (dBA)		
Descriptior Land Use	Daytime	Evening	Night
Reference Residential	80	70	70

			Equipment Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dozer	No	40		81.7	50	0
Backhoe	No	40		77.6	50	0
Auger Drill Rig	No	20		84.4	50	0
Grader	No	40	85		50	0
Tractor	No	40	84		50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	84.4	77.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85	85.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 9/11/2023
Case Descri Hydrogen Facility_18months Option 2

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
W Mt Whit	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	2720	0
Backhoe	No	40		77.6	2720	0
Auger Drill Rig	No	20		84.4	2720	0
Grader	No	40	85		2720	0
Tractor	No	40	84		2720	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	47	43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	42.8	38.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	49.6	42.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	50.3	46.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	49.3	45.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	50.3	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Reference	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	50	0
Backhoe	No	40		77.6	50	0
Auger Drill Rig	No	20		84.4	50	0
Grader	No	40	85		50	0
Tractor	No	40	84		50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	84.4	77.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85	85.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 9/11/2023
Case Descri Green Hydrogen Facility_36months Option 1

---- Receptor #1 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
South Sonc	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Auger Drill Rig	No	20		84.4	5110	0
Grader	No	40	85		5110	0
Tractor	No	40	84		5110	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Auger Drill Rig	44.2	37.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	44.8	40.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	43.8	39.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	44.8	44.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Reference	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Auger Drill Rig	No	20		84.4	50	0
Grader	No	40	85		50	0
Tractor	No	40	84		50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Auger Drill Rig	84.4	77.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85	84.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 9/11/2023
Case Descr Green Hydrogen Facility_36months Option 2

---- Receptor #1 ----

	Baselines (dBA)		
Description Land Use	Daytime	Evening	Night
W Mt Whit Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Auger Drill Rig	No	20		84.4	2720	0
Grader	No	40	85		2720	0
Tractor	No	40	84		2720	0

	Results													
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Auger Drill Rig	49.6	42.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	50.3	46.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	49.3	45.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	50.3	49.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

	Baselines (dBA)		
Description Land Use	Daytime	Evening	Night
Reference Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Auger Drill Rig	No	20		84.4	50	0
Grader	No	40	85		50	0
Tractor	No	40	84		50	0

	Results													
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Auger Drill Rig	84.4	77.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85	84.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 9/1/2023
Case Descr Inverters, Transform, Substation, Electrical_36months

---- Receptor #1 ----

		Baselines (dBA)		
Descriptior	Land Use	Daytime	Evening	Night
Inverter, Tr	Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	721	0
Tractor	No	40	84		721	0
Excavator	No	40		80.7	721	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	54.4	50.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	60.8	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	57.5	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	60.8	59.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Descriptior	Land Use	Daytime	Evening	Night
Substation	Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	4900	0
Tractor	No	40	84		4900	0
Excavator	No	40		80.7	4900	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	37.7	33.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	44.2	40.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	40.9	36.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	44.2	42.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Descriptior	Land Use	Daytime	Evening	Night
Reference	Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	50	0
Tractor	No	40	84		50	0
Excavator	No	40		80.7	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84	82.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
West Strou	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	721	0
Tractor	No	40	84		721	0
Excavator	No	40		80.7	721	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	54.4	50.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	60.8	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	57.5	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	60.8	59.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
West Cerin	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	4225	0
Tractor	No	40	84		4225	0
Excavator	No	40		80.7	4225	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	39	35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	45.5	41.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	42.2	38.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	45.5	43.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 9/1/2023
Case Descr Inverters, Transform, Substation, Electrical_18months

---- Receptor #1 ----

	Baselines (dBA)		
Descriptior Land Use	Daytime	Evening	Night
Inverter, Tı Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	610	0
Tractor	No	40	84		610	0
Excavator	No	40		80.7	610	0
Welder / Torch	No	40		74	610	0
Crane	No	16		80.6	610	0

			Results											
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	55.8	51.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	62.3	58.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	59	55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	52.3	48.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	58.8	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	62.3	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

	Baselines (dBA)		
Descriptior Land Use	Daytime	Evening	Night
Substation Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	4900	0
Tractor	No	40	84		4900	0
Excavator	No	40		80.7	4900	0
Welder / Torch	No	40		74	4900	0
Crane	No	16		80.6	4900	0

			Results											
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	37.7	33.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	44.2	40.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	40.9	36.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	34.2	30.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	40.7	32.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	44.2	43.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

	Baselines (dBA)		
Descriptior Land Use	Daytime	Evening	Night
Reference Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	50	0
Tractor	No	40	84		50	0
Excavator	No	40		80.7	50	0
Welder / Torch	No	40		74	50	0
Crane	No	16		80.6	50	0

			Results											
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	74	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84	83	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
West Strou	Residential	80	70	70

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	721	0
Tractor	No	40	84		721	0
Excavator	No	40		80.7	721	0
Welder / Torch	No	40		74	721	0
Crane	No	16		80.6	721	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	54.4	50.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	60.8	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	57.5	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	50.8	46.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	57.4	49.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	60.8	59.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
West Cerin	Residential	80	70	70

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	4225	0
Tractor	No	40	84		4225	0
Excavator	No	40		80.7	4225	0
Welder / Torch	No	40		74	4225	0
Crane	No	16		80.6	4225	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	39	35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	45.5	41.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	42.2	38.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	35.5	31.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	42	34.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	45.5	44.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 9/1/2023
Case Descr Darden Solar_PV Panel System_24months

---- Receptor #1 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
PV Panel S	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	163	0
Grader	No	40	85		163	0
Auger Drill Rig	No	20		84.4	163	0
Backhoe	No	40		77.6	163	0
Tractor	No	40	84		163	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	71.4	67.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	74.7	70.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	74.1	67.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	67.3	63.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	73.7	69.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74.7	75.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
PV Panel S	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	271	0
Grader	No	40	85		271	0
Auger Drill Rig	No	20		84.4	271	0
Backhoe	No	40		77.6	271	0
Tractor	No	40	84		271	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	67	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	70.3	66.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	69.7	62.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62.9	58.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.3	70.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
PV Panel S	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	188	0
Grader	No	40	85		188	0
Auger Drill Rig	No	20		84.4	188	0
Backhoe	No	40		77.6	188	0
Tractor	No	40	84		188	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					

			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	70.2	66.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	73.5	69.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	72.9	65.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	72.5	68.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	73.5	74.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
PV Panel S\	Residential	80	70	70

			Equipment Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dozer	No	40		81.7	533	0
Grader	No	40	85		533	0
Auger Drill Rig	No	20		84.4	533	0
Backhoe	No	40		77.6	533	0
Tractor	No	40	84		533	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	61.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	64.4	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	63.8	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	57	53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	63.4	59.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.4	65	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Reference	Residential	80	70	70

			Equipment Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dozer	No	40		81.7	50	0
Grader	No	40	85		50	0
Auger Drill Rig	No	20		84.4	50	0
Backhoe	No	40		77.6	50	0
Tractor	No	40	84		50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	84.4	77.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85	85.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
PV Panel S\	Residential	80	70	70

			Equipment Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Dozer	No	40		81.7	100	0
Grader	No	40	85		100	0
Auger Drill Rig	No	20		84.4	100	0

Backhoe	No	40		77.6	100	0
Tractor	No	40	84		100	0

	Calculated (dBA)		Results						Noise Limits (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	75.6	71.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	79	75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	78.3	71.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	71.5	67.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	78	74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	79	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 9/1/2023
Case Descr PV Panel System_36months

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
PV Panel S	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	163	0
Grader	No	40	85		163	0
Tractor	No	40	84		163	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	71.4	67.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	74.7	70.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	73.7	69.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74.7	74.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
PV Panel S	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	271	0
Grader	No	40	85		271	0
Tractor	No	40	84		271	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	67	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	70.3	66.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.3	69.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
PV Panel S	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	188	0
Grader	No	40	85		188	0
Tractor	No	40	84		188	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	70.2	66.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	73.5	69.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	72.5	68.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	73.5	73.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
PV Panel S\	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	533	0
Grader	No	40	85		533	0
Tractor	No	40	84		533	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	61.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	64.4	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	63.4	59.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.4	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Reference	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	50	0
Grader	No	40	85		50	0
Tractor	No	40	84		50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85	84.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
PV Panel S\	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	100	0
Grader	No	40	85		100	0
Tractor	No	40	84		100	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	75.6	71.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	79	75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	78	74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	79	78.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 9/1/2023
Case Descri Site Preparation_36months

---- Receptor #1 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site Prepar	Residential	80	70	70

Equipment						
Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	163	0
Tractor	No	40	84		163	0
Grader	No	40	85		163	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	71.4	67.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	73.7	69.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	74.7	70.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74.7	74.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site Prepar	Residential	80	70	70

Equipment						
Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	188	0
Tractor	No	40	84		188	0
Grader	No	40	85		188	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	70.2	66.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	72.5	68.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	73.5	69.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	73.5	73.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site Prepar	Residential	80	70	70

Equipment						
Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	271	0
Tractor	No	40	84		271	0
Grader	No	40	85		271	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	67	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	70.3	66.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.3	69.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site Prepar	Residential	80	70	70

Equipment

Spec	Actual	Receptor	Estimated

Description	Impact Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	533	0
Tractor	No	40	84		533	0
Grader	No	40	85		533	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	61.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	63.4	59.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	64.4	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.4	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Reference	Residential	80	70	70

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	50	0
Tractor	No	40	84		50	0
Grader	No	40	85		50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85	84.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Site Prepar	Residential	80	70	70

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	100	0
Tractor	No	40	84		100	0
Grader	No	40	85		100	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	75.6	71.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	78	74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	79	75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	79	78.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 9/1/2023
Case Descr Site Preparation 18months

---- Receptor #1 ----

Baselines (dBA)			
Descriptior	Land Use	Daytime	Evening	Night
Site Prepar	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	163	0
Backhoe	No	40		77.6	163	0
Tractor	No	40	84		163	0
Grader	No	40	85		163	0
Roller	No	20		80	163	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	71.4	67.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	67.3	63.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	73.7	69.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	74.7	70.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	69.7	62.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74.7	74.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)			
Descriptior	Land Use	Daytime	Evening	Night
Site Prepar	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	188	0
Backhoe	No	40		77.6	188	0
Tractor	No	40	84		188	0
Grader	No	40	85		188	0
Roller	No	20		80	188	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	70.2	66.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	66.1	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	72.5	68.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	73.5	69.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	68.5	61.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	73.5	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)			
Descriptior	Land Use	Daytime	Evening	Night
Site Prepar	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	271	0
Backhoe	No	40		77.6	271	0
Tractor	No	40	84		271	0
Grader	No	40	85		271	0
Roller	No	20		80	271	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	67	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62.9	58.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	69.3	65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	70.3	66.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	65.3	58.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.3	70.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site Prepar	Residential	80	70	70

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	533	0
Backhoe	No	40		77.6	533	0
Tractor	No	40	84		533	0
Grader	No	40	85		533	0
Roller	No	20		80	533	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	61.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	57	53	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	63.4	59.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	64.4	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	59.4	52.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.4	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Reference	Residential	80	70	70

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	50	0
Backhoe	No	40		77.6	50	0
Tractor	No	40	84		50	0
Grader	No	40	85		50	0
Roller	No	20		80	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	80	73	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85	85.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
S Napa Ave	Residential	80	70	70

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	100	0
Backhoe	No	40		77.6	100	0
Tractor	No	40	84		100	0
Grader	No	40	85		100	0
Roller	No	20		80	100	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	75.6	71.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	71.5	67.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	78	74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	79	75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	74	67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	79	79.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 9/11/2023
Case Descr Substation_18months Option 1

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
South Napa	Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	6920	0
Tractor	No	40	84		6920	0
Excavator	No	40		80.7	6920	0
Welder / Torch	No	40		74	6920	0
Crane	No	16		80.6	6920	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	34.7	30.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	41.2	37.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	37.9	33.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	31.2	27.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	37.7	29.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	41.2	40.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
	Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	4900	0
Tractor	No	40	84		4900	0
Excavator	No	40		80.7	4900	0
Welder / Torch	No	40		74	4900	0
Crane	No	16		80.6	4900	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	37.7	33.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	44.2	40.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	40.9	36.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	34.2	30.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	40.7	32.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	44.2	43.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Reference	Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	50	0
Tractor	No	40	84		50	0
Excavator	No	40		80.7	50	0
Welder / Torch	No	40		74	50	0
Crane	No	16		80.6	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	74	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84	83	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
	Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	721	0
Tractor	No	40	84		721	0
Excavator	No	40		80.7	721	0
Welder / Torch	No	40		74	721	0
Crane	No	16		80.6	721	0

	Results													
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	54.4	50.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	60.8	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	57.5	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	50.8	46.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	57.4	49.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	60.8	59.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
	Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	4225	0
Tractor	No	40	84		4225	0
Excavator	No	40		80.7	4225	0
Welder / Torch	No	40		74	4225	0
Crane	No	16		80.6	4225	0

	Results													
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	39	35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	45.5	41.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	42.2	38.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	35.5	31.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	42	34.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	45.5	44.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 9/11/2023
Case Descr Substation_18months Option 2

---- Receptor #1 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
West Cerin	Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	4225	0
Tractor	No	40	84		4225	0
Excavator	No	40		80.7	4225	0
Welder / Torch	No	40		74	4225	0
Crane	No	16		80.6	4225	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	39	35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	45.5	41.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	42.2	38.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	35.5	31.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	42	34.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	45.5	44.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
	Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	4900	0
Tractor	No	40	84		4900	0
Excavator	No	40		80.7	4900	0
Welder / Torch	No	40		74	4900	0
Crane	No	16		80.6	4900	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	37.7	33.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	44.2	40.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	40.9	36.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	34.2	30.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	40.7	32.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	44.2	43.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

	Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Reference	Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	50	0
Tractor	No	40	84		50	0
Excavator	No	40		80.7	50	0
Welder / Torch	No	40		74	50	0
Crane	No	16		80.6	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	74	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84	83	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Baselines (dBA)			
Descriptior Land Use	Daytime	Evening	Night
Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	721	0
Tractor	No	40	84		721	0
Excavator	No	40		80.7	721	0
Welder / Torch	No	40		74	721	0
Crane	No	16		80.6	721	0

	Results													
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	54.4	50.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	60.8	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	57.5	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	50.8	46.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	57.4	49.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	60.8	59.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Baselines (dBA)			
Descriptior Land Use	Daytime	Evening	Night
Residential	80	70	70

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Backhoe	No	40		77.6	4225	0
Tractor	No	40	84		4225	0
Excavator	No	40		80.7	4225	0
Welder / Torch	No	40		74	4225	0
Crane	No	16		80.6	4225	0

	Results													
	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	39	35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	45.5	41.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	42.2	38.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	35.5	31.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	42	34.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	45.5	44.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 9/11/2023
Case Descri Substation_36months Option 1

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
South Napa	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	6920	0
Tractor	No	40	84		6920	0
Excavator	No	40		80.7	6920	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	34.7	30.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	41.2	37.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	37.9	33.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	41.2	39.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	4900	0
Tractor	No	40	84		4900	0
Excavator	No	40		80.7	4900	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	37.7	33.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	44.2	40.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	40.9	36.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	44.2	42.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Reference	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	50	0
Tractor	No	40	84		50	0
Excavator	No	40		80.7	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84	82.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
	Residential	80	70	70

			Equipment Spec	Actual	Receptor	Estimated

Description	Impact Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Backhoe	No	40		77.6	721	0
Tractor	No	40	84		721	0
Excavator	No	40		80.7	721	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	54.4	50.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	60.8	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	57.5	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	60.8	59.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
	Residential	80	70	70

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	4225	0
Tractor	No	40	84		4225	0
Excavator	No	40		80.7	4225	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	39	35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	45.5	41.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	42.2	38.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	45.5	43.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 9/11/2023
Case Descri Substation_36months Option 2

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
West Cerin	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	4225	0
Tractor	No	40	84		4225	0
Excavator	No	40		80.7	4225	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	39	35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	45.5	41.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	42.2	38.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	45.5	43.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	4900	0
Tractor	No	40	84		4900	0
Excavator	No	40		80.7	4900	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	37.7	33.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	44.2	40.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	40.9	36.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	44.2	42.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Reference	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	50	0
Tractor	No	40	84		50	0
Excavator	No	40		80.7	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84	82.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor	Estimated

Description	Impact Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Backhoe	No	40		77.6	721	0
Tractor	No	40	84		721	0
Excavator	No	40		80.7	721	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	54.4	50.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	60.8	56.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	57.5	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	60.8	59.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
	Residential	80	70	70

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	4225	0
Tractor	No	40	84		4225	0
Excavator	No	40		80.7	4225	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Backhoe	39	35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	45.5	41.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	42.2	38.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	45.5	43.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date 9/11/2023
Case Descr Utility Switchyard_18months

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	33158.4	0
Grader	No	40	85		33158.4	0
Auger Drill Rig	No	20		84.4	33158.4	0
Tractor	No	40	84		33158.4	0
Roller	No	20		80	33158.4	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	25.2	21.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	28.6	24.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	27.9	20.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	27.6	23.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	23.6	16.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	28.6	29.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
reference	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	50	0
Grader	No	40	85		50	0
Auger Drill Rig	No	20		84.4	50	0
Tractor	No	40	84		50	0
Roller	No	20		80	50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Auger Drill Rig	84.4	77.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	80	73	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85	85.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Tanimura +	Commercial	85	85	85

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	5320	0
Grader	No	40	85		5320	0
Auger Drill Rig	No	20		84.4	5320	0
Tractor	No	40	84		5320	0
Roller	No	20		80	5320	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	41.1	37.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	44.5	40.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Auger Drill Rig	43.8	36.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	43.5	39.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	39.5	32.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	44.5	45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat 7/28/2023
Case Descr Darden Solar_Utility Switchyard_36months

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
School	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	33158.4	0
Grader	No	40	85		33158.4	0
Tractor	No	40	84		33158.4	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	25.2	21.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	28.6	24.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	27.6	23.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	28.6	28.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
reference	Residential	80	70	70

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	50	0
Grader	No	40	85		50	0
Tractor	No	40	84		50	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85	84.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Tanimura +	Commercial	85	85	85

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	5320	0
Grader	No	40	85		5320	0
Tractor	No	40	84		5320	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	41.1	37.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	44.5	40.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	43.5	39.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	44.5	44	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Appendix J-3

Traffic Noise Model (FHWA RD 77-108) Results

Appendix ___

Rincon FHWA Traffic Noise Model

rincon

Model Input

Project Name :	Darden Clean Energy
Project Number :	22-12530
Modeling Condition :	Existing
Ground Type :	Soft
Metric (L_{eq}, L_{dn}, CNEL) :	Ldn

Peak ratio to ADT:	
Traffic Desc. (Peak or ADT) :	ADT

Segment Number	Roadway	Segment From	Segment To	Traffic Volume	Speed (mph)	Distance to Centerline	Vehicle Cassification Mix (%) Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	24-Hour Traffic Distribution (%) Day	Evening	Night	K-Factor
1	Mt Whitney Ave	west of SR 41		1,800	55	30	73			4.6	22.4	80	5	15	
2	Mt Whitney Ave			2,200	55	300	73			4.6	22.4	80	5	15	
3	Colusa			850	55	25	73			4.6	22.4	80	5	15	
4	SR 145			3,300	55	150	73			4.6	22.4	80	5	15	
5	SR 145			4,100	55	35	73			4.6	22.4	80	5	15	
6	SR 145			7,300	55	45	73			4.6	22.4	80	5	15	
7	SR 145			12,000	55	30	73			4.6	22.4	80	5	15	
8	SR 269			4,100	55	40	73			4.6	22.4	80	5	15	

rincon

Model Results

Project Number :	Darden Clean Energy
Modeling Condition :	22-12530
Ground Type :	Existing
Metric (Leq, Ldn, CNEL) :	Ldn

Segment Number	Roadway	Segment From	Segment To	Noise Levels (dB) Ldn Automobiles	Motorcycles	Bus	Medium Trucks	Heavy Trucks	Total
1	Mt Whitney Ave	west of SR 41		60.3	0.0	0.0	54.4	65.7	67.0
2	Mt Whitney Ave			46.2	0.0	0.0	40.2	51.5	52.9
3	Colusa			58.3	0.0	0.0	52.3	63.6	64.9
4	SR 145			52.5	0.0	0.0	46.5	57.8	59.2
5	SR 145			62.9	0.0	0.0	56.9	68.2	69.6
6	SR 145			63.8	0.0	0.0	57.8	69.1	70.5
7	SR 145			68.6	0.0	0.0	62.6	73.9	75.3
8	SR 269			62.0	0.0	0.0	56.1	67.4	68.7

Distance to Traffic Noise Contours (feet) 70 dB	65 dB	60 dB	55 dB	50 dB
19	41	88	190	409
22	47	101	217	467
12	25	53	115	248
28	61	132	284	612
33	71	152	328	708
48	104	224	482	1,039
67	145	312	672	1,448
33	71	152	328	708

Relative Increase in Noise Levels (Traffic)

Traffic Volume Increase Calculations				
Roadway Segment	**Initial Traffic Volume**	**Future Traffic Volume**	**Percentage Increase in Traffic Volume**	**Increase in Noise Level (dBA)**
18-Month Scenario				
W Mt. Whitney Ave	1800	2100	16.7%	0.7
W Mt. Whitney Ave	2200	4570	107.7%	3.2
Colusa Ave	850	1190	40.0%	1.5
SR 145	3300	3640	10.3%	0.4
SR 145	4100	4100	0.0%	0.0
SR 145	7300	8170	11.9%	0.5
SR 145	12,000	13,470	12.3%	0.5
SR 269	4100	5,000	22.0%	0.9
36-month Scenario				
W Mt. Whitney Ave	1800	2,040	13.3%	0.5
W Mt. Whitney Ave	2200	4,090	85.9%	2.7
Colusa Ave	850	1,120	31.8%	1.2
SR 145	3300	3,570	8.2%	0.3
SR 145	4100	4,100	0.0%	0.0
SR 145	7,300	8470	16.0%	0.6
SR 145	12,000	13,170	9.7%	0.4
SR 269	4,100	4,820	17.6%	0.7
Operations				
W Mt. Whitney Ave	1800	2,000	11.1%	0.5
W Mt. Whitney Ave	2200	2,500	13.6%	0.6
Colusa Ave	850	950	11.8%	0.5
SR 145	3300	3,650	10.6%	0.4
SR 145	4100	4,440	8.3%	0.3
SR 145	7300	8,100	11.0%	0.5
SR 145	12,000	13,290	10.8%	0.4
SR 269	4100	4,550	11.0%	0.5

Appendix J-4

SoundPLAN Calculations

Receiver	Usage	Fl	Dir	dB(A)	Lr,lim	dB(A	Lr,lim	dB(A	Ldn	dB(A)	Leq,d	dB(A	Leq,n	dB(A	Ldn,diff	dB	Leq,d,diff	(	Leq,n,diff	dB
R-1	SCR	G								-3		-9.4		-9.4						
R-2	SCR	G								-1.8		-8.2		-8.2						
R-3	SCR	G								4.5		-1.9		-1.9						
R-4	SCR	G								5.6		-0.9		-0.9						
R-5	SCR	G								14.4		8		8						
R-6	SCR	G								36.3		29.9		29.9						
R-7	SCR	G								36.9		30.5		30.5						
R-8	SCR	G								37.4		31		31						
R-9	SCR	G								37		30.6		30.6						
R-10	SCR	G								37.3		30.9		30.9						
R-11	SCR	G								36.7		30.3		30.3						
R-12	SCR	G								38.1		31.7		31.7						
R-13	SCR	G								41.6		35.2		35.2						
R-14	SCR	G								40.9		34.5		34.5						
R-15	SCR	G								16.8		10.4		10.4						
R-16	SCR	G								1.9		-4.5		-4.5						

Receiver	Usage	Fl	Dir	dB(A)	Lr,lim	dB(A	Lr,lim	dB(A	Ldn	dB(A)	Leq,d	dB(A	Leq,n	dB(A	Ldn,diff	dB	Leq,d,diff	(	Leq,n,diff	dB
R-1	SCR	G								42.3		35.9		35.9						
R-2	SCR	G								42.3		35.9		35.9						
R-3	SCR	G								43.7		37.3		37.3						
R-4	SCR	G								43.7		37.3		37.3						
R-5	SCR	G								42		35.6		35.6						
R-6	SCR	G								33.8		27.4		27.4						
R-7	SCR	G								37.6		31.2		31.2						
R-8	SCR	G								37.9		31.5		31.5						
R-9	SCR	G								38.5		32.1		32.1						
R-10	SCR	G								39.6		33.2		33.2						
R-11	SCR	G								40.9		34.5		34.5						
R-12	SCR	G								50.9		44.5		44.5						
R-13	SCR	G								45.6		39.2		39.2						
R-14	SCR	G								46.4		40		40						
R-15	SCR	G								16.8		10.4		10.4						
R-16	SCR	G								1.9		-4.5		-4.5						

Appendix J-5

Vibration Calculations

Site Preparation Damage	Vibration @ 25 ft	Residential Area to E (600)
		63
Impact Pile Driver	0.644	0.161
Vibratory Roller	0.21	0.052
Large Bulldozer	0.089	0.022
Loaded Trucks	0.076	0.019
Jackhammer	0.035	0.009
Small Bulldozer	0.003	0.001

Site Preparation Annoyance	Vibration @ 25 ft	Residential Area to E (600)
	VdB	100
Vibratory Roller	82	69.958
Large Bulldozer	87	74.958
Loaded Trucks	86	73.958
Jackhammer	79	66.958
Small Bulldozer	58	45.958

BESS Option 1 Damage	Vibration @ 25 ft	Residential Area to E (600)
		7,145
Impact Pile Driver	0.644	0.161
Vibratory Roller	0.21	0.052
Large Bulldozer	0.089	0.022
Loaded Trucks	0.076	0.019
Jackhammer	0.035	0.009
Small Bulldozer	0.003	0.001

BESS Option 1 Annoyance	Vibration @ 25 ft	Residential Area to E (600)
	VdB	7145
Vibratory Roller	82	69.958
Large Bulldozer	87	74.958
Loaded Trucks	86	73.958
Jackhammer	79	66.958
Small Bulldozer	58	45.958

BESS Option 2 Damage	Vibration @ 25 ft	Residential Area to E (600)
		2290
Impact Pile Driver	0.644	0.161
Vibratory Roller	0.21	0.052
Large Bulldozer	0.089	0.022
Loaded Trucks	0.076	0.019
Jackhammer	0.035	0.009
Small Bulldozer	0.003	0.001

BESS Option 2 Annoyance	Vibration @ 25 ft	Residential Area to E (600)
	VdB	2290
Vibratory Roller	82	-17.418
Large Bulldozer	87	-17.852
Loaded Trucks	86	-17.973
Jackhammer	79	-17.986
Small Bulldozer	58	-18.027