

APPENDIX I

Noise Supplemental Information

Appendix I.1	Noise and Vibration Impact Assessment Report
Appendix I.2	Noise Modeling

NOISE SUPPLEMENTAL INFORMATION

APPENDIX I.1

Noise and Vibration Impact Assessment Report

LS Power Grid California, LLC

Noise and Vibration Impact Assessment Report

**Collinsville 500/230 Kilovolt Substation Project
Solano, Sacramento, and Contra Costa Counties,
California**

Revision 7

September 24, 2024

Noise and Vibration Impact Assessment Report

**Collinsville 500/230 Kilovolt Substation Project
Solano, Sacramento, and Contra Costa Counties, California**

September 24, 2024

Prepared By:

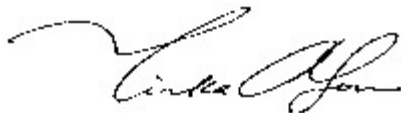
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Contents

Acronyms and Abbreviations.....	v
Executive Summary.....	1
1 Introduction.....	1
2 Fundamentals of Noise and Vibration	5
2.1 Basic Noise Concepts	5
2.2 Basic Vibration Concepts	6
3 Regulatory Setting.....	8
3.1 Federal Regulations	8
3.2 State Regulations	8
3.2.1 California Public Utilities Commission.....	8
3.2.2 California Government Code Section 65302.....	8
3.2.3 California Department of Transportation and Construction-Induced Vibration Guidance.....	8
3.3 Local Regulations	9
3.3.1 Solano County General Plan Noise Element	9
3.3.2 Solano County Noise Ordinance.....	10
3.3.3 Sacramento County General Plan Noise Element.....	11
3.3.4 Sacramento County Noise Ordinance	11
3.3.5 Contra Costa County General Plan Noise Element.....	12
3.3.6 Contra Costa County Ordinance Code	12
3.3.7 City of Pittsburg General Plan Noise Element.....	12
3.3.8 City of Pittsburg Ordinance Code.....	13
3.3.9 Summary of Relevant Noise Level Criteria	13
4 Existing Noise and Vibration Conditions	14
4.1 Existing Noise Conditions	14
4.2 Existing Vibration Conditions	16
5 Modeling	17
5.1 Construction Noise.....	17
5.1.1 Substation Construction Noise	17
5.1.2 Transmission Line Construction Noise.....	20
5.1.3 Construction Noise Levels from Other Land-based Components	24
5.2 Construction Vibration.....	31

5.3 Operation and Maintenance Noise..... 33

5.3.1 Substation Operation and Maintenance Noise 33

5.3.2 Transmission Line Audible Noise During Operation and Maintenance..... 37

6 Impacts Significance Analysis 40

7 Conclusions 46

8 References 47

Table 2-1. Sound Levels of Common Noise Sources 5

Table 3-1. Guideline Vibration Damage Potential Threshold Criteria 9

Table 3-2. Guideline Vibration Annoyance Potential Criteria 9

Table 3-3. Solano County Noise Element - Non-Transportation Noise Standards (Average [L_{eq}, dBA] / Maximum [L_{max}, dBA]) 10

Table 3-4. Sacramento County Noise Element - Non-Transportation Noise Standards (Median [L₅₀, dBA] / Maximum [L_{max}, dBA]) 11

Table 4-1. Long-term Noise Measurement Results Near Collinsville Substation Site and New Transmission Line Corridor 15

Table 4-2. Short-term Noise Measurement Results Near Existing PG&E Pittsburg Substation 16

Table 4-3. Summary of Measured Ambient Daytime and Nighttime Noise Levels and Calculated Day-Night Ambient Noise Levels 16

Table 5-1. New Substation Construction Noise Levels by Phase 18

Table 5-2. Proposed PG&E 500 kV Interconnection Construction Noise Levels by Phase 21

Table 5-3. Proposed LSPGC 230 kV Overhead Segment Construction Noise Levels by Phase 23

Table 5-4. Proposed LSPGC 230 kV Underground Segment Noise Levels by Phase 26

Table 5-5. 12 kV Distribution Line Extension Construction Noise Levels by Phase 27

Table 5-6. Telecommunications Line Extension Construction Noise Levels by Phase..... 28

Table 5-7. Pittsburg Substation Modification Construction Noise Levels by Phase..... 29

Table 5-8. Staging Yard Establishment and Use Noise Levels without Helicopters – South of the River ... 30

Table 5-9. Staging Yard Establishment and Use Noise Levels with Helicopters – North of the River 31

Table 5-10. Construction Equipment Vibration Noise Levels 33

Table 5-11. Equipment Sound Power Levels at Collinsville Substation (Per Unit)..... 34

Table 5-12. Daytime Substation Noise Modeling Results at Nearest Sensitive Receptor 36

Table 5-13. Nighttime Substation Noise Modeling Results at Nearest Sensitive Receptor..... 36

Table 5-14. Day-Night Substation Noise Modeling Results at Nearest Sensitive Receptor 37

Table 5-15. Physical and Electrical Characteristics of New Transmission and Interconnection Lines 38

Figures

- Figure 1** **Project Overview Map**
- Figure 2** **Project Components Map**
- Figure 3** **Noise Measurement Locations and Nearest Sensitive Receptors**
- Figure 4** **Land Use Compatibility for Community Noise Environments**
- Figure 5** **Daytime Noise Contours**
- Figure 6** **Nighttime Noise Contours**
- Figure 7** **Day-Night Noise Contours**
- Figure 8** **Audible Noise Profile in Foul and Fair Weather for Proposed 230 kV Double-Circuit Line**
- Figure 9** **Audible Noise Profile in Foul and Fair Weather for 500 kV Single-Circuit Line**

Appendices

- Appendix A** **Instrument Certificate of Calibration**
- Appendix B** **Photograph Log**

Acronyms and Abbreviations

ANSI	American National Standards Institute
BPA	Bonneville Power Administration
Cadna/A	Computer Aided Noise Abatement
CAISO	California Independent System Operator
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
CPUC	California Public Utilities Commission
dB	Decibel (Unweighted)
dBA	Decibel (A-weighted)
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
Gal	Gallon
GIS	Gas-Insulated Switchgear
HP	Horsepower
HVAC	Heating, Ventilation, and Air Conditioning
Hz	Hertz
ID	Identification
ISO	International Organization for Standardization
kV	Kilovolt
Lb	Pound
L _{dn} or DNL	Day-Night Sound Level
L _{eq}	Equivalent Sound Level
L _{eq(day)}	Continuous Equivalent Sound Level Between 07:00 AM and 10:00 PM
L _{eq(night)}	Continuous Equivalent Sound Level Between 10:00 PM and 07:00 AM
L _{max}	Maximum Sound Level
L _{PA}	Sound Pressure Level
L _{WA}	Sound Power Level
L _x	Sound Level Exceed x Percent of a Specified Time Period
LSPGC	LS Power Grid California, LLC
MVA	Mega Volt Ampere
NM1, NM2	Noise Measurement Location 1, Noise Measurement Location 2
NVIA	Noise and Vibration Impact Assessment
ONAN	Oil Natural Air Natural
ONAF	Oil Natural Air Forced (First Stage Cooling)
ONAF2	Oil Natural Air Forced (Second Stage Cooling)
PG&E	Pacific Gas and Electric Company
PPV	Peak Particle Velocity
R	Receptor
RCNM	Roadway Construction Noise Model
ROW	Right-of-Way
SLM	Sound Level Meter
USEPA	United States Environmental Protection Agency
WSDOT	Washington State Department of Transportation
Yd	Yard

Executive Summary

Arcadis Inc. (Arcadis), on behalf of LS Power Grid California, LLC (LSPGC), a wholly owned subsidiary of LS Power, has prepared this noise and vibration impact assessment (NVIA) report to evaluate noise and vibration impacts for the Collinsville 500/230 Kilovolt (kV) Substation Project (Proposed Project) in portions of Solano, Sacramento, and Contra Costa Counties, California. The Proposed Project involves the construction of a substation and transmission lines to address the California Independent System Operator (CAISO)-identified overloads in the Greater Bay Area by increasing transmission reliability for the area and advancing additional renewable generation.

The Collinsville Substation would occupy approximately 11 acres of land. This NVIA report provides an evaluation of the potential noise and vibration impacts from the Proposed Project during construction, operation, and maintenance based on standards of impact significance derived from Appendix G of the California Environmental Quality Act (CEQA) Noise Guidelines.

Arcadis identified locations of sensitive receptors using aerial maps and geographic information systems. Four (4) sensitive receptors (a cultural resource site, two residential areas and one cemetery) were identified within one mile (5,280 feet) radius from the new substation boundary and one (1) sensitive receptor (the cultural resource site) was identified within a quarter mile (1,320 feet) of the new overhead transmission lines. The cemetery is also approximately 590 feet northwest of a new 12 kV distribution extension to the proposed LSPGC Collinsville Substation. Additionally, one (1) sensitive receptor (residential area with multiple single-family homes) was identified within a half-mile (2,640 feet) of the southern edge of the Sacramento River and San Joaquin confluence where open trenching methods of construction would be used to connect the submarine cables to an onshore underground utility vault. The residential area is also 20 to 50 feet east of telecommunication line extension and approximately 2,000 feet from PG&E's existing Pittsburg Substation modifications (i.e., in the vicinity of the interconnections with new lines).

The Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) User's Guide was used to calculate the Proposed Project construction noise levels. Input variables for the RCNM consist of the receptor/land use types, the equipment type, number of units operating concurrently, the acoustical usage factor for each piece of equipment, and the distance between the construction activity and sensitive receptor. The California Department of Transportation's (Caltrans) Transportation and Construction Vibration Guidance Manual was used to calculate construction vibration from the Proposed Project.

A three-dimensional industrial noise model, Computer Aided Noise Abatement (Cadna/A), was built for the new Collinsville Substation combining digital elevation data with the sound source specifications and coordinates, sensitive receptor coordinates, and sound propagation parameters to generate a sound model for the Proposed Project. The resulting model was then used to perform sound emission calculations using International Organization for Standardization (ISO) 9613-2 method. Corona-generated audible noise from the new 230 kV overhead transmission and 500 kV overhead interconnection lines was predicted using methods and equations developed by the Bonneville Power Administration (BPA). The BPA audible noise calculation method is an empirical method developed from long-term statistical measurements on a number of full-scale operating or test transmission lines.

The findings of this NVIA report are that under CEQA, the noise impact associated with the construction, operation, and maintenance of the Proposed Project would be less than significant. Similarly, vibration impact associated with construction of the Proposed Project would be less than significant; however, vibration from the Proposed Project's operation and maintenance would result in no impact.

1 Introduction

LS Power Grid California, LLC (LSPGC), a wholly owned subsidiary of LS Power established to own and operate transmission projects in California, is proposing the Collinsville 500/230 kilovolt (kV) Substation Project (Proposed Project) to be located in portions of Solano, Sacramento, and Contra Costa Counties, California. The Proposed Project involves the construction of a substation and transmission lines to address the California Independent System Operator (CAISO)-identified overloads in the Greater Bay Area by increasing transmission reliability for the area and advancing additional renewable generation.

The main components of the Proposed Project include:

- A new approximately 11-acre 500/230 kV substation (LSPGC Collinsville Substation);
- Two approximately 1.5-mile-long single-circuit 500 kV transmission line segments that would extend Pacific Gas and Electric Company's (PG&E's) existing Vaca Dixon-Tesla 500 kV Transmission Line to the proposed LSPGC Collinsville Substation;¹
- A new approximately 6-mile-long double-circuit 230 kV transmission line connecting the proposed LSPGC Collinsville Substation to PG&E's existing Pittsburg Substation. The new 230 kV transmission line would include:
 - An approximately 1- to 2-mile-long overhead transmission line segment, that would connect the proposed LSPGC Collinsville Substation to the in-river transition structure (north side of the Sacramento River),
 - One steel in-river transition structure to transition the overhead conductors to submarine cables on the northern edge of the Sacramento River,
 - Six approximately 4.5-mile-long submarine cables installed approximately 6 to 15 feet below the sediment surface, and
 - An onshore underground utility vault near PG&E's existing Pittsburg Substation to connect the submarine cables to underground cables that would terminate at approximately two new riser poles adjacent to PG&E's existing Pittsburg Substation; and
- A new 12 kV distribution line, connecting an existing PG&E distribution line to the proposed LSPGC Collinsville Substation; and
- A telecommunications line extension, connecting existing 3rd party fiber to the proposed LSPGC Collinsville Substation.

This noise and vibration impact assessment (NVIA) report focuses on the Proposed Project's impact on airborne noise and groundborne vibration in the surrounding community. The NVIA report does not include the Proposed Project's impacts on underwater sound and its effect on aquatic species during in-river construction of the submarine cables.

For the purpose of this report, the proposed LSPGC Collinsville 500/230 kV Substation is referred to as Collinsville Substation or new substation. The proposed LSPGC new 230 kV overhead transmission line is referred to as the proposed LSPGC 230 kV Overhead Segment. The proposed PG&E 500 kV overhead

¹ PG&E would be responsible for the final configuration of the northern tie in of the 500 kV loop-in between the proposed Collinsville Substation and the existing Vaca Dixon-Tesla 500 kV Transmission Line. LS Power would be responsible for the installation of dead-end structures near the Collinsville Substation to facilitate looping in the 500 kV lines.

interconnecting line is referred to as the proposed PG&E 500 kV Interconnection. The underground portion is referred to as the proposed LSPGC 230 kV Underground Segment or 230 kV Southern Construction.

Arcadis was retained by LSPGC to prepare a NVIA report for the Proposed Project as part of the Proponent's Environmental Assessment that would be submitted to the California Public Utilities Commission (CPUC). The Collinsville Substation would include seven single phase 500/230 kV autotransformers (six operating, one spare), one 500 kV series capacitors bank, one control enclosure, 500 kV gas-insulated switchgear (GIS) enclosure, 230 kV GIS enclosure, and two 10-ohm series reactors per 230 kV line (triangle arrangement). The Collinsville Substation would be surrounded by a prefabricated interlocking security wall that would be 10 feet tall with 1 foot of barbed wire on top. The access gate would have an opening of 16 feet in width.

The Collinsville Substation construction would require the entire approximately 11-acre substation site to be cleared of all vegetation and graded to create a generally flat area for the substation components. In addition, a new access road to the substation would be constructed. Next, the ground grid, equipment foundations, and cable trenches would be installed. Once the below-grade construction is complete, the above ground substation components would be installed. Finally, testing and commissioning would be conducted once the transmission lines are terminated at the substation prior to energization.

The overhead transmission lines would be constructed on land within an approximately 120-foot-wide right-of-way and would require new temporary access roads and work areas to be established at each structure location. This process would involve vegetation clearing and blading, as required to create a flat area to facilitate construction. For the overhead structures, one or more foundations for each structure would be constructed prior to the erection of lattice steel structures or self-supporting, steel monopoles. Typically, 230 kV transmission structures range from 160 to 180 feet in height and could be up to 199 feet tall when crossing other infrastructure. The 500 kV structures for the Proposed Project would typically be larger than the 230 kV structures, ranging between 100 and 199 feet in height. The 500 kV structures would typically utilize a horizontal conductor configuration and the 230 kV poles would use a vertical conductor configuration. Finally, the conductors and two optical ground wires would be strung along the proposed LSPGC 230 kV Overhead Segment alignment. Following construction, an approximately 20-foot radius around the new structures would remain cleared to facilitate future operation and maintenance.

In-water work for the submarine cables would include the construction of an in-river transition structure mounted on a pier supported concrete cap on the northern side of the Sacramento River. The submarine cables would be trenched under the riverbed using a hydroplow and water jetting or vertical injector methods with no backfilling required. Near the southern edge of the Sacramento River and San Joaquin River confluence, open trenching methods of construction would be used to connect the submarine cables to an onshore underground utility vault (i.e., the proposed LSPGC 230 kV Underground Segment). The cables would then continue in an underground configuration to designated locations near the fence of PG&E's existing Pittsburg Substation. The Proposed Project also includes construction of a 12 kV distribution extension to the Collinsville Substation, a telecommunications line extension that goes through the underground utility vault onto the LSPGC Collinsville Substation, and modifications to the Pittsburg Substation.

The Proposed Project would also require the establishment of temporary staging areas, stringing sites, access roads, and construction areas to utilize during construction. All temporarily impacted areas would be restored to near pre-construction conditions after work is complete.

The current land uses around the proposed Collinsville Substation site include natural resource land areas (including Suisun Marsh and the Sacramento River and San Joaquin River waterways), utility operations,

residences, wind farms, and agricultural lands. The Proposed Project would connect to PG&E's existing Pittsburg Substation, which is surrounded by industrial land uses; bordered by recreational areas and parks (including Pittsburg Marina, Pittsburg Riverview Park, and Marina Walk Park), St. Peter Martyr School, downtown low-density and medium-density residential uses, and marine commercial land uses to the east; and bordered by service commercial, mixed use, business commercial, and low-density residential to the south. The areas surrounding the proposed submarine cable and in-river transition structure include tidal marsh, open water, and benthic habitats.

A Project Overview map showing the location of the Collinsville Substation site, new transmission lines, and interconnection lines is included in **Figure 1**. The Proposed Project components are depicted in more detail in **Figure 2**.

The nearest sensitive receptors to the Collinsville Substation site and new transmission and interconnection lines are shown in **Figure 3**. The noise and vibration study area for the Proposed Project covers one mile (5,280 feet) radius of the new substation; a quarter mile (1,320 feet) of the proposed LSPGC 230 kV Overhead Segment, proposed PG&E 500 kV Interconnection, telecommunication line extension, and distribution line extension; and one-half mile (2,640 feet) of the proposed LSPGC 230 kV Underground Segment where open trenching methods of construction would be used to connect the submarine cables to an onshore underground utility vault. The nearest sensitive receptors to the center of the Collinsville Substation site include one cultural resource site called Hastings Adobe (nominated to the National Register of Historic Places in 1972; depicted as R1 in **Figure 3**), two residential areas (depicted as R2 and R3 in **Figure 3**), and one cemetery (depicted as R4 in **Figure 3**). The distance and direction of the nearest receptors to the center of the new substation are listed below:

- R1 (Hastings Adobe, a cultural resource site) is approximately 1,790 feet southeast of the new substation center.
- R2 (single-family residences along Latin Road) is approximately 4,175 feet southwest of the new substation center.
- R3 (single-family residences along Collinsville Road) is approximately 4,280 feet west-southwest of the new substation center.
- R4 (St. Charles Borromeo Catholic Cemetery along Abruzzini Hill Road, off Collinsville Road) is approximately 4,700 feet west-northwest of the substation center. The cemetery is also approximately 590 feet northwest of a new 12 kV distribution extension to the Collinsville Substation.

The nearest receptor to the proposed LSPGC 230 kV Overhead Segment and the proposed PG&E 500 kV Interconnection is approximately 555 feet south and 1,950 feet south, respectively (R1 in **Figure 3**). The nearest receptor to the proposed LSPGC 230 kV Underground Segment or 230 kV southern construction (open trench method) is a residential area with multiple single-family residences on Halsey Court/Halsey Way, approximately 1,370 feet east-southeast (R5 in **Figure 3**). The residential area (R5) is also 20 to 50 feet east of the telecommunication line extension construction activities and 2,000 feet southeast of the Pittsburg Substation modifications.

The objectives of this NVIA report are as follows:

- Identify applicable noise and vibration regulations.
- Estimate Project-related noise and vibration levels at nearest sensitive receptors during construction, operation, and maintenance.

Noise and Vibration Impact Assessment Report

- Determine whether the Proposed Project can operate in compliance with the applicable noise and vibration regulatory standards and CEQA impact significance thresholds and recommend mitigation measures if needed.

This NVIA report includes a description of the Proposed Project site, noise and vibration fundamentals, applicable regulations and standards, existing noise and vibration conditions, modeling and impact significance analysis for construction, operations and maintenance, and concluding comments.

2 Fundamentals of Noise and Vibration

2.1 Basic Noise Concepts

The terms ‘sound’ and ‘noise’ tend to be used interchangeably, but noise can be defined as unwanted sound, whereas sound is a normal and desirable part of life. However, when noise is imposed on people it can lead to disturbance, annoyance, and other undesirable effects. Sound is physically characterized by amplitude and frequency. The amplitude of sound is measured in decibels (dB) as the logarithmic ratio of a sound pressure to a reference sound pressure (20 micro-Pascals). The reference sound pressure corresponds to the typical threshold of human hearing. To the average listener, a 3-dB change in a continuous broadband sound is considered “just barely perceptible”; a 5-dB change is considered “clearly noticeable”; and a 10-dB change is considered a doubling (or halving if the sound is decreasing) of the apparent loudness and can cause an adverse response. Sound waves can occur at different frequencies, which correspond to the sound’s wavelength. Frequency is measured in Hertz (Hz), which is the number of wave cycles per second that occur. The typical human ear can hear frequencies ranging from approximately 20 to 20,000 Hz. Normally, the human ear is most sensitive to sounds in the middle frequencies (1,000 to 8,000 Hz) and is less sensitive to sounds in the lower and higher frequencies. As such, the A-weighting scale was developed to simulate the frequency response of the human ear to sounds at typical environmental levels. The A-weighting scale emphasizes sounds in the middle frequencies and de-emphasizes sounds in the low and high frequencies. Any sound level to which the A-weighting scale has been applied is expressed in A-weighted decibels, or dBA. Sound levels and relative loudness of common noise sources are presented for reference in **Table 2-1**.

Table 2-1. Sound Levels of Common Noise Sources

Common Noise Source	Noise Levels, dBA
Threshold of pain	140
Jet taking off (200 feet away)	130
Operating heavy equipment	120
Night club (with music)	110
Construction site	100
Boiler room	90
Freight train (100 feet away)	80
Classroom chatter	70
Conversation (3 feet away)	60
Urban residence	50
Soft whisper (5 feet away)	40
North Rim of Grand Canyon	30
Silent study room	20
Threshold of human hearing (1,000 Hertz)	0

Notes:

dBA = A-weighted decibel

Source: U.S. Department of Labor, Occupational Safety and Health Administration 2013

Sound can be characterized in terms of sound power level and sound pressure level. The sound power level is a measure of the total power radiated by a source. The sound power level is a fundamental property of the source and is independent of the surrounding environment. The sound pressure level is the level of sound pressure, as measured at a distance by a standard sound level meter with a microphone. This differs from the sound power level in that it is the received sound as opposed to the sound intensity at the source.

A given level of noise may be more or less tolerable depending on the sound level, duration of exposure, character of the noise sources, time of day during which the noise is experienced, and activity affected by the noise. For example, noise that occurs at night tends to be more disturbing than that which occurs during the day because sleep could potentially be disturbed.

Since sound in the environment often varies over time, statistical noise descriptors have been developed to quantify fluctuating environmental sound levels. The most commonly used indices for measuring community noise levels include the following:

- **L_{eq}**: The equivalent sound level is used to describe noise over a specified period of time, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
- **L_{dn} or DNL**: The day-night noise level or the energy average of the A-weighted sound levels occurring during a 24-hour period, which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to consider the greater annoyance of nighttime noises.
- **CNEL**: The Community Noise Equivalent Level, which is similar to the L_{dn}, adds a 5-dBA penalty for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to the 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.²
- **L_x**: The sound level that is equaled or exceeded x percent of a specified time period. The L₅₀ represents the median sound level (i.e., the noise level exceeded 50 percent of the time, or 30 minutes out of an hour).
- **L_{max}**: The instantaneous maximum noise level measured during the measurement period of interest.

2.2 Basic Vibration Concepts

Vibration is defined as any oscillatory motion induced in a structure or mechanical device as a direct result of some type of input excitation such as forces, moments, or pressure fields. Vibration is transmitted through solid material such as the ground by wave motion, giving rise to the terminology of “groundborne” vibration. Consequently, the term “vibration” and groundborne vibration” are the same and are therefore, used interchangeably in this NVIA report. Groundborne vibration propagates from sources such as railways and impact pile driving through the ground into nearby structures and buildings. Soil properties affect the propagation of groundborne vibration. The vibration energy spreads out as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. When groundborne vibration interacts with a building there is usually a ground-to-foundation coupling loss, but the vibration can also be amplified by the structural resonances of the walls and floors. Vibration in buildings is typically perceived as the rattling of windows or items

² For typical community noise environments, the CNEL and L_{dn} levels are nearly always within 1 dB of each other and, therefore, are commonly used interchangeably (as would be the case in this NVIA report).

on shelves or the motion of building surfaces. Vibration of building surfaces can also be radiated as sound and heard as a low-frequency rumbling noise, known as groundborne noise.

Groundborne vibrations transmitted from site activities to the neighborhood can cause anxiety as well as annoyance, and can disturb sleep, work, or leisure activities. Groundborne vibration can be expressed in terms of the peak particle velocity (PPV) of the soil particles resulting from a disturbance in inches per second. Agencies such as California Department of Transportation (Caltrans) use the PPV descriptor because it correlates well with damage and complaints due to vibration.

3 Regulatory Setting

Federal, state, and local noise and vibration regulations were reviewed to determine the applicable sound level limits for the Proposed Project.

3.1 Federal Regulations

There are no federal noise standards that directly regulate noise from the operation of electrical transmission lines and substation facilities. However, in 1974 the United States Environmental Protection Agency (USEPA) established guidelines for noise levels, defined to protect public health and welfare with an adequate margin of safety. The USEPA established criteria for protecting public health and wellbeing. The USEPA guideline recommends a L_{dn} of 55 dBA to protect the public from the effect of broadband environmental noise outdoors in residential areas and farms, and other outdoor areas where people spend widely varying amounts of time, and other places in which quiet is a basis for use (USEPA, 1974). However, these criteria do not constitute enforceable Federal regulations or standards. The USEPA has since delegated regulatory authority to local entities. Therefore, no Federal noise regulations apply to the Proposed Project.

3.2 State Regulations

3.2.1 California Public Utilities Commission

The CPUC General Order 131-D, (GO 131-D), Section XIV.B states: “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission’s jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters.” Therefore, public utilities are directed to consider local regulations and consult with local agencies.

3.2.2 California Government Code Section 65302

California Government Code Section 65302 encourages counties and cities to implement a noise element as part of the general plan. In addition, the California Governor’s Office of Planning and Research has developed guidelines for preparing noise elements, which include recommendations for evaluating the compatibility of various land uses as a function of community noise exposure.

3.2.3 California Department of Transportation and Construction-Induced Vibration Guidance

Caltrans provides practical guidance to engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans-related projects. The guideline vibration criteria in Caltrans’ Transportation and Construction Vibration Guidance Manual (Caltrans 2020) have been used to assess the effects of vibration during the Proposed Project construction. Vibration was assessed for two potential effects:

1. human annoyance (disturbance or discomfort); and
2. cosmetic or structural damage.

Vibration also has the potential to disrupt the operation of vibration-sensitive research and advanced technology equipment such as optical microscopes, cell probing devices, magnetic resonance imaging machines, scanning electron microscopes, photolithography equipment, micro-lathes, and precision milling equipment (Caltrans 2020).

However, there is no known vibration-sensitive research and advanced technology equipment within the Proposed Project vicinity; therefore, vibration criteria and effects on such receptors are not discussed further.

Table 3-1 presents guideline vibration criteria to assess cosmetic or structural damage potential from ground vibration induced by construction equipment. In terms of human perception (i.e., annoyance), **Table 3-2** provides guidance on the effects of ground vibration levels due to use of heavy equipment. The guideline vibration criteria in **Tables 3-1** and **3-2** are applicable to continuous and frequent intermittent sources such as construction equipment and passing heavy vehicles that would be used during the Proposed Project construction. For the purpose of this NVIA, continuous or frequent intermittent vibration sources are significant when their PPV exceeds the vibration damage criterion of 0.3 inch per second for older residential structures and/or when it exceeds the vibration annoyance criterion of 0.01 inch per second for a barely perceptible human response.

Table 3-1. Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV for Continuous/ Frequent Intermittent Sources (inches per second)
Extremely fragile historic buildings, ruins, ancient monuments	0.08
Fragile buildings	0.1
Historic and some old buildings	0.25
Older residential structures	0.3
New residential structures	0.5
Modern industrial/commercial buildings	0.5

Notes:

PPV = peak particle velocity

Source: Caltrans 2020

Table 3-2. Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV for Continuous/ Frequent Intermittent Sources (inches per second)
Barely perceptible	0.01
Distinctly perceptible	0.04
Strongly perceptible	0.10
Severe	0.4

Notes:

PPV = peak particle velocity

Source: Caltrans 2020

3.3 Local Regulations

The Proposed Project is located in portions of Solano, Sacramento, and Contra Costa Counties, California. Relevant noise standards and policies for three counties are described below.

3.3.1 Solano County General Plan Noise Element

The County of Solano General Plan Noise Element Table HS-5 (listed in **Table 3-3** below) establishes an acceptable outdoor area noise level of 55 dBA L_{eq} for daytime (7:00 a.m. to 10:00 p.m.) and 50 dBA L_{eq} for

nighttime (10:00 p.m. to 7:00 a.m.) for non-transportation noise sources. The standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards, then the noise level standards shall be increased at 5 dBA increments to encompass the ambient.

Table 3-3. Solano County Noise Element - Non-Transportation Noise Standards (Average [L_{eq} , dBA] / Maximum [L_{max} , dBA])

Receiving Land Use	Outdoor Area ¹		Interior ^{1,2}	
	Daytime	Nighttime	Interior Day and Night	Notes
All Residential	55 / 70	50 / 70	35 / 55	
Transient Lodging	55 / 75	---	35 / 55	3
Hospitals & Nursing Homes	55 / 75	---	35 / 55	4,5
Theaters & Auditoriums	---	---	30 / 50	5
Churches, Meeting Halls, Schools, Libraries, etc.	55 / 75	---	35 / 60	5
Office Buildings	60 / 75	---	45 / 65	5
Commercial Buildings	55 / 75	---	45 / 65	5
Playgrounds, Parks, etc.	60 / 75	---	---	5
Industry	60 / 80	---	50 / 70	5

Notes:

Source: Solano County 2015.

L_{eq} = equivalent or energy-average sound level; L_{max} = Highest root-mean-square sound level measured over a given period of time.

1. The noise standards shall be reduced by 5 dBA for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the noise standards, then the noise level standards shall be increased at 5-dBA increments to encompass the ambient.
2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in closed positions.
3. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
4. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
5. The outdoor activity areas of these uses (if any) are not typically utilized during nighttime hours.

3.3.2 Solano County Noise Ordinance

The Solano County Noise, Section 28.1-40, provides an exterior noise level standard of 55 dBA Leq between 7:00 a.m. and 7:00 p.m. and an exterior noise level standard of 50 dBA Leq between 7:00 p.m. and 7:00 a.m. for residential and agricultural zoning districts (Solano County, 2017). If the measured ambient noise level at the time of complaint investigation exceeds the identified permissible noise for that zone, the allowable noise standard shall be the ambient noise level. Section 28.1-30 of the noise ordinance provides an interior noise level standard of 55 dBA Leq between 7:00 a.m. and 7:00 p.m. and an interior noise level standard of 45 dBA between 7:00 p.m. and 7:00 a.m. for residential land use. According to Section 28.1-50(a) of the noise ordinance, construction and demolition activities within a residential district or within a radius of 500 feet are allowed only between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and Saturday between 8:00 a.m. and 5:00 p.m.; construction and demolition activities are not allowed on Sundays and Federal holidays.

3.3.3 Sacramento County General Plan Noise Element

The County of Sacramento General Plan Noise Element Table 2 (listed in **Table 3-4** below) establishes an acceptable outdoor area noise level of 55 dBA L₅₀ for daytime (7:00 a.m. to 10:00 p.m.) and 50 dBA L₅₀ for nighttime (10:00 p.m. to 7:00 a.m.) for non-transportation noise sources. The standards are reduced by 5 dB for sounds consisting primarily of speech or music, such as a speaker in a drive-through. Where median (L₅₀) noise level data is not available for a particular noise source, average (L_{eq}) values may be substituted for the standards shown in **Table 3-4** provided the noise source in question operates for at least 30 minutes of an hour. If the source in question operates less than 30 minutes per hour, then the maximum noise level standards shown in the table would apply.

Table 3-4. Sacramento County Noise Element - Non-Transportation Noise Standards (Median [L₅₀, dBA] / Maximum [L_{max}, dBA])

Receiving Land Use	Outdoor Area ¹		Interior ^{1,2}	
	Daytime	Nighttime	Interior Day & Night	Notes
All Residential	55 / 75	50 / 70	35 / 55	
Transient Lodging	55 / 75	---	35 / 55	3
Hospitals & Nursing Home	55 / 75	---	35 / 55	4,5
Theaters & Auditoriums	---	---	30 / 50	5
Churches, Meeting Halls, Schools, Libraries, etc.	55 / 75	---	35 / 60	5
Office Buildings	60 / 75	---	45 / 65	5
Commercial Buildings	---	---	45 / 65	5
Playgrounds, Parks, etc.	60 / 75	---	---	5
Industry	60 / 80	---	50 / 70	5

Notes:

Source: Sacramento County, 2017.

L₅₀ = median noise level or level exceeded 50 percent of time; L_{max} = Highest root-mean-square sound level measured over a given period of time.

1. The noise standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the noise standards, then the noise level standards shall be increased at 5 dB increments to encompass the ambient.
2. Interior noise level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.
3. Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.
4. Hospitals are often noise-generating uses. The exterior noise level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.
5. The outdoor activity areas of these uses (if any) are not typically utilized during nighttime hours.

3.3.4 Sacramento County Noise Ordinance

The Sacramento County Municipal Code, Section 6.68.070, provides an exterior noise level standard of 55 dBA L_{eq} for daytime (7:00 a.m. to 10:00 p.m.) and an exterior noise level standard of 50 dBA L_{eq} for nighttime (10:00 p.m. to 7:00 a.m.) for residential zoning districts (Sacramento County, 2023). According to Section 6.68.090 of the Code, noise sources associated with construction, repair, remodeling, demotion, paving or grading of any real

property are exempt provided said activities do not take place between the hours of 8:00 p.m. and 6:00 a.m. on weekdays and Friday commencing at 8:00 p.m. through and including 7:00 a.m. on Saturday; Saturdays commencing at 8:00 p.m. through and including 7:00 a.m. on the next following Sunday and on each Sunday after the hour of 8:00 p.m.

3.3.5 Contra Costa County General Plan Noise Element

The objectives and policies of the Contra costa County noise element are aimed at protecting the citizens of Contra Costa County from excessive noise levels that interfere with daily routine and comfort. Noise from construction activities in Contra Costa County is exempt from applicable standards during daytime hours. Applicable policies are summarized below (Contra Costa County 2010):

- Policy 11-1: New projects shall be required to meet acceptable exterior noise level standards as established in the Noise and Land Use Compatibility Guidelines contained in Figure 11-6 (shown in this NVIA report as **Figure 4**). These guidelines, along with future noise levels should be used by the county as a guide for evaluating the compatibility of “noise sensitive” projects in potentially noisy areas.
- Policy 11-2: The standard for outdoor noise levels in residential areas is a DNL of 60 dB. However, a DNL of 60 dB or less may not be achievable in all residential areas due to economic or aesthetic constraints. One example is small balconies associated with multi-family housing. In this case, second and third story balconies may be difficult to control to the goal. A common outdoor use area that meets the goal can be provided as an alternative.

3.3.6 Contra Costa County Ordinance Code

Contra Costa County does not have a noise ordinance code.

3.3.7 City of Pittsburg General Plan Noise Element

The following Policy of the city of Pittsburg (City) General Plan (City of Pittsburg, 2001) is relevant to the Proposed Project:

- Policy 12-P-9 establishes that generation of loud noises on construction sites adjacent to existing development should be limited to normal business hours between 8 a.m. and 5 p.m.
- Policy 12-P-10 establishes that the impact of truck traffic noise on residential areas should be reduced by limiting such traffic to appropriate truck routes, and that consideration is given to restrict truck travel times in sensitive areas.

The City’s General Plan Noise Element also generally describes a range of changes in ambient (existing) noise levels and how these changes would be perceived by the community, such as a residential receptor, in terms of significance of impact:

- Except under special conditions, a change in sound level of 1 dB cannot be perceived.
- A 3 dB change is considered a “just noticeable” difference.
- A 5 dB change is required before any noticeable change in community response would be expected. A 5 dB change is often considered a “significant impact”.
- A 10 dB change is subjectively heard as an approximate doubling in loudness and almost always causes an adverse community response.

3.3.8 City of Pittsburg Ordinance Code

The City's Municipal Code (City of Pittsburg, 2007) Noise Ordinance (Section 9.44.010) does not establish numerical noise-level limits related to construction noise but makes it unlawful for any person to make, continue or cause to be made, or continue any noise which either unreasonably annoys, disturbs, injures, or endangers the comfort, repose, health, peace, or safety of others, within the limits of the City. Unreasonable noise sources listed in the ordinance, and potentially relevant to the Proposed Project, include unmuffled vehicle exhaust (9.44.010.H) and pile drivers, hammers, and similar equipment (9.44.010.J). The City's Municipal Code (City of Pittsburg, 2007) Building and Construction Ordinance (Section 15.88.060.A.5) prohibits grading noise, including warming up equipment motors, within 1,000 feet of a residence between the hours of 5:30 p.m. and 7 a.m. weekdays, unless otherwise approved by the City Engineer.

3.3.9 Summary of Relevant Noise Level Criteria

The Proposed Project is in portions of Solano, Sacramento, and Contra Costa, counties. All three counties have similar noise standards for non-transportation (stationary) noise sources. The Proposed Project, which shall be considered a non-transportation noise source, shall not be permitted to generate noise levels exceeding:

- 55 dBA L_{50} or L_{eq} during daytime (7:00 a.m. to 10:00 p.m.) hours,
- 50 dBA L_{50} or L_{eq} during nighttime (10:00 p.m. to 7:00 a.m.) hours, and
- 60 dBA L_{dn} or CNEL (day-night) hours at the adjacent residential uses.

4 Existing Noise and Vibration Conditions

4.1 Existing Noise Conditions

Arcadis personnel conducted sound level measurements on September 25 and 26, 2023, to establish existing ambient environment at key locations of the Proposed Project area, including the Collinsville Substation site and the proposed LSPGC 230 kV Overhead Segment. Unattended long-term noise measurements (NM2) were conducted for 24 hours (started at 8:00 a.m. on Monday September 25 and ended 8:00 a.m. on Tuesday September 26) along Collinsville Road near residential receptor, R3, and approximately 4,300 feet west-southwest of the Collinsville Substation site (see **Figure 3**). Attended short-term measurements (NM1) were conducted for one hour during the day (10:57 a.m. to 11:57 a.m. on Monday, September 25) and one hour at night (11:04 p.m. to 12:04 a.m. on Monday, September 25 and Tuesday, September 26) near residential receptor, R5 on Halsey Court (near Pittsburg Substation) and approximately 2,200 feet southeast of the proposed LSPGC 230 kV Underground Segment (**Figure 3**). The attended short-term measurements were conducted near the Pittsburg Substation instead of unattended long-term measurement due to the risk of theft. The ambient noise recorded at both measurement locations are expected to be representative of the existing ambient noise levels at the nearest sensitive receptors to the Collinsville Substation site, along the new transmission line corridor, and near the proposed LSPGC telecommunications extension.

Measurements were taken with a fully calibrated Casella CEL-633C Type 1 Sound Level Meter (SLM), equipped with a microphone/pre-amplifier and a windscreen to reduce wind induced sound. The SLM and the microphone was setup at a height of approximately 5 feet above ground level. The SLM was setup to measure average A-weighted equivalent sound levels (L_{eq}) and was field calibrated prior to and following the noise measurement to ensure accuracy. All sound level measurements conducted and presented in this NVIA report were made with a SLM that conforms to the American National Standards Institute (ANSI) specifications for sound level meters (ANSI S1.4 1983 (R2006)). All instruments are maintained with National Bureau of Standards traceable calibrations, per the manufacturers' standards. A copy of the calibration certificate for the SLM is provided in **Appendix A**. A photograph log of the SLM set-up is provided in **Appendix B**.

The primary audible noise sources contributing to the short-term ambient sound levels at NM1 were infrequent vehicle traffic from nearby roads, construction noises in the neighborhood, dogs barking, leaves rustling, and noise from a nearby power generating plant. The primary audible noise sources contributing to the long-term ambient sound levels at NM2 were infrequent vehicle traffic from nearby roads and birds chirping.

Weather conditions were calm and conducive for noise measurements with sunny conditions during the day and partly cloudy skies at night. Ambient temperatures ranged from 59 to 78 degrees Fahrenheit during the day and 63 to 64 degrees Fahrenheit at night. Relative humidity ranged from 43 to 83 percent during the day and 75 to 84 percent at night. Average wind speed during the day ranged from 4 to 9 miles per hour, primarily in a northeast direction. At night, average wind speed was 5 miles per hour, primarily in a northeast direction. No precipitation occurred during the survey.

A summary of the 24-hour L_{eq} noise levels measured near the new substation site and the one-hour L_{eq} noise levels measured near the new transmission line corridor are presented in **Table 4-1** and **Table 4-2**, respectively. **Table 4-3** summarizes the measured daytime ambient sound levels ($L_{eq(day)}$) and nighttime ambient sound levels ($L_{eq(night)}$) for the two measurement locations, along with the calculated day-night sound levels (L_{dn}). As defined in Section 3, the L_{dn} is the A-weighted equivalent noise level for a 24-hour period with a 10-dB adjustment added to sound levels occurring during nighttime hours (10:00 p.m. to 07:00 a.m.).

The L_{dn} is calculated using the following formula:

$$L_{dn} = 10 \log_{10} \left(\frac{15}{24} 10^{\frac{L_{eq(day)}}{10}} + \frac{9}{24} 10^{\frac{(L_{eq(night)}+10)}{10}} \right)$$

Where $L_{eq(day)}$ is the continuous equivalent A-weighted daytime level between 07:00 a.m. and 10:00 p.m., and $L_{eq(night)}$ is the continuous equivalent A-weighted nighttime level between 10:00 p.m. and 07:00 a.m. the following day. Based on the above summaries, the calculated L_{dn} (or CNEL) noise level at sensitive receptors near the new substation and near the new transmission line corridor are 46 and 50 dBA, respectively (**Table 4-3**).

Table 4-1. Long-term Noise Measurement Results Near Collinsville Substation Site and New Transmission Line Corridor

Measurement Date	Measurement Time	Measured Noise Levels, One-Hour L_{eq} (dBA)
Monday, September 25, 2023	08:00 a.m. - 09:00 a.m.	41
	09:00 a.m. - 10:00 a.m.	47
	10:00 a.m. - 11:00 a.m.	43
	11:00 a.m. - 12:00 p.m.	47
	12:00 p.m. - 01:00 p.m.	40
	01:00 p.m. - 02:00 p.m.	51
	02:00 p.m. - 03:00 p.m.	54
	03:00 p.m. - 04:00 p.m.	44
	04:00 p.m. - 05:00 p.m.	47
	05:00 p.m. - 06:00 p.m.	49
	06:00 p.m. - 07:00 p.m.	42
	07:00 p.m. - 08:00 p.m.	49
	08:00 p.m. - 09:00 p.m.	51
	09:00 p.m. - 10:00 p.m.	49
10:00 p.m. - 11:00 p.m.	37	
Tuesday, September 26, 2023	11:00 p.m. - 12:00 a.m.	41
	12:00 a.m. - 01:00 a.m.	41
	01:00 a.m. - 02:00 a.m.	40
	02:00 a.m. - 03:00 a.m.	44
	03:00 a.m. - 04:00 a.m.	45
	04:00 a.m. - 05:00 a.m.	44
	05:00 a.m. - 06:00 a.m.	40
	06:00 a.m. - 07:00 a.m.	38
07:00 a.m. - 08:00 a.m.	45	

Notes:

L_{eq} = average equivalent sound level; dBA = A-weighted sound level

Table 4-2. Short-term Noise Measurement Results Near Existing PG&E Pittsburg Substation

Measurement Date	Measurement Time	Measured Noise Levels, One-Hour L_{eq} (dBA)
Monday, September 25, 2023, to Tuesday, September 26, 2023	10:57 a.m. - 11:57 a.m.	46
	11:04 p.m. - 12:04 a.m.	40

Notes:

L_{eq} = average equivalent sound level; dBA = A-weighted sound level

Table 4-3. Summary of Measured Ambient Daytime and Nighttime Noise Levels and Calculated Day-Night Ambient Noise Levels

Noise Measurement Location ID	Measurement Location Description	Measured Ambient $L_{eq(day)}$, dBA	Measured Ambient $L_{eq(night)}$, dBA	Calculated Ambient L_{dn} , dBA
NM2	Long-term measurement location near residential receptor, R3, and approximately 4,300 feet west-southwest of the Collinsville Substation site (Figure 3).	48	42	50
NM1	Short-term noise measurement location near residential receptor, R5 on Halsey Court and approximately 2,200 feet southeast of the southern edge of the Sacramento River and San Joaquin River confluence (Figure 3).	46	40	48

Notes:

$L_{eq(day)}$ = average equivalent sound level during daytime (7:00 a.m. to 10:00 p.m.)

$L_{eq(night)}$ = average equivalent sound level during nighttime (7:00 a.m. to 10:00 p.m.)

L_{dn} = A-weighted equivalent sound level for a 24-hour period with a 10-dB adjustment added to sound levels occurring during nighttime hours (10:00 p.m. to 07:00 a.m.)

dBA = A-weighted sound level

ID = identification

4.2 Existing Vibration Conditions

Currently, no ground or air-vibrating sources or activities (i.e., mine blasting, pile driving, locomotives, etc.) are present at or near the Collinsville Substation site or along the new transmission/interconnection line corridor. In addition, rubber-tired vehicles such as those on nearby public roads and highways, do not generate any significant amount of groundborne vibration (FTA 2018). Like noise emissions, ground and air vibration effects diminish with distance from the source, so baseline levels of vibration at the Proposed Project site and surrounding areas are expected to be negligible.

5 Modeling

5.1 Construction Noise

5.1.1 Substation Construction Noise

The Collinsville Substation construction noise levels were estimated using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) User's Guide (FHWA 2006). Although the model was developed by the FHWA, RCNM is often used for non-roadway projects, because the same types of construction equipment used for roadway projects are also used to construct other project types. Input variables for the RCNM consist of the receptor/land use types, the equipment type, the acoustical usage factor for each piece of equipment (e.g., percentage of time during a construction noise operation that a piece of construction equipment is operating at full power), and the distance between the construction activity and sensitive receptor. No topographical or structural shielding was assumed in the modeling of construction noise (i.e., the receptors are modeled with no obstacles to the propagation of sound between the construction activity and receptor location, a worst-case assumption). For construction equipment where measured noise levels were unavailable, noise level information for similar equipment types was assumed. Specifically, construction noise levels were calculated using the equation below:

$$L_{eq(h)} = L_{max} - 20 \log (D/D_0) + 10 \log (U.F.) + 10 \log (\text{number of units operating concurrently})$$

Where:

$L_{eq(h)}$ = A-weighted, equivalent sound level at a receptor resulting from operation of a piece of equipment over a 1-hour time period;

L_{max} = Maximum noise emission level of equipment based on its work cycle at distance D_0 ;

U.F. = Usage Factor, which accounts for the percent time that equipment is in use over the time period of interest (1 hour). For example, a U.F. of 1.0 applies for equipment in use over 1 entire hour, while a U.F. of 0.40 applies for equipment in use for 24 minutes per hour;

D = Distance from the equipment to the receptor of interest; and

D_0 = Reference distance at which the L_{max} was measured for the piece of equipment of interest.

The four noise sensitive receptors within one mile (5,280 feet) radius of the Collinsville Substation site comprise of one cultural resource site, two residential areas, and one cemetery (**Figure 3**).

The result of the Collinsville Substation construction noise analysis is summarized in **Table 5-1**. The table includes a list of equipment typically used for construction of substation facilities by phase and the calculated A-weighted L_{eq} noise levels for each phase of construction based on the individual equipment's maximum noise levels (L_{max}), the equipment usage factor, number of units operating concurrently, and the distances between the work sites and the nearest receptor location. The new substation construction noise levels at nearest receptor, R1 (1,790 feet away) range from 43 dBA during survey to 62 dBA during below grade construction and commissioning and testing. Construction noise levels at the other sensitive receptors (R2, R3, and R4) located further away would be lower.

Table 5-1. New Substation Construction Noise Levels by Phase

Construction Equipment Type	FHWA RCNM Construction Equipment L_{max} at 50 Feet (dBA)	Usage Factor	Estimated Number of Units	Calculated Noise Levels at Nearest Receptor (Residence), 1,790 feet from Center of New Substation Site, L_{eq} (dBA)
Survey (26 Days)				
Pickup Truck (1/2-Ton, 395 HP)	75	40%	2	43
Site Development (102 Days)				
Water Truck (4,000 Gal, 300 HP)	72	40%	4	43
Loader (4-5 Yd, 230 HP)	79	40%	2	47
Dump Truck (10-12 Yd, 415 HP)	76	40%	3	46
Motor Grader (250 HP)	85	40%	2	53
Scraper (410 HP)	84	40%	4	55
Vibratory Roller (157 HP)	80	20%	2	45
Pickup Truck (1/2-Ton, 395 HP)	75	40%	4	46
Generator (36 HP)	81	50%	2	50
Forklift (15,000 Lb Reach, 130 HP)	88	20%	4	56
Pickup Truck (1-Ton, 410 HP)	75	40%	4	46
844 Loader (417 HP)	79	40%	1	44
Semi-Truck (500 HP) ¹	74	40%	2	42
Subtotal (Logarithmic Sum)				61
Below Grade Construction (123 Days)				
Water Truck (4,000 Gal, 300 HP)	72	40%	4	43
Excavator (108 HP)	81	40%	2	49
Forklift (15,000 Lb Reach, 130 HP)	88	20%	3	55
Backhoe (2x4, 68 HP)	78	40%	2	46
Pickup Truck (1/2-Ton, 395 HP)	75	40%	4	46
Pickup Truck (1-Ton, 410 HP)	75	40%	4	46
Excavator - Mini (170 HP)	81	40%	1	46
Generator (36 HP)	81	50%	1	47
Concrete Mixer Truck (425 HP)	79	40%	4	50
Loader (4-5 Yd, 230 HP)	79	40%	2	47
Pressure Digger - Lo-Drill (Tracked, 275 HP) ²	84	20%	1	46
Excavator (275 HP)	81	40%	1	46
Dump Truck (10-12 Yd, 415 HP)	76	40%	3	46
Tool - Van/Conex 20-foot ³	85	50%	6	59
Trencher (75 HP) ⁴	80	50%	2	49
Skid Steer Loader (74 HP)	79	40%	2	47
Subtotal (Logarithmic Sum)				62
Above Grade Construction (274 Days)				

Noise and Vibration Impact Assessment Report

Construction Equipment Type	FHWA RCNM Construction Equipment L_{max} at 50 Feet (dBA)	Usage Factor	Estimated Number of Units	Calculated Noise Levels at Nearest Receptor (Residence), 1,790 feet from Center of New Substation Site, L_{eq} (dBA)
Wire Trailer/ Tensioner (175 HP) ⁵	85	50%	1	51
Wire Puller (175 HP) ⁵	85	50%	1	51
Crane (200 Ton, 275 HP)	81	16%	1	42
Pickup Truck (1/2-Ton, 395 HP)	75	40%	4	46
Pickup Truck (1-Ton, 410 HP)	75	40%	4	46
Welding Truck (395 HP)	74	40%	2	42
Generator (36 HP)	81	50%	2	50
Crane (35 Ton, 250 HP)	81	16%	1	42
Forklift (10,000 Lb Reach, 130 HP)	88	20%	2	53
Forklift (15,000 Lb Reach, 130 HP)	88	20%	1	50
Loader (4-5 Yd, 74 HP)	79	40%	2	47
Man Lift (120-foot, 74 HP)	75	20%	2	40
Subtotal (Logarithmic Sum)				59
Commissioning and Testing (174 Days)				
Pickup Truck (1/2-Ton, 395 HP)	75	40%	4	46
Pickup Truck (1-Ton, 410 HP)	75	40%	4	46
Man Lift (40-foot, 49 HP)	75	20%	3	42
Water Truck (4,000 Gal, 300 HP)	72	40%	6	45
Tool - Van/Conex 20-foot ³	85	50%	6	59
Deck Barge (not a noise source)	N/A	N/A	1	N/A
Tugboat (3,300 HP) ⁶	87	50%	2	56
Support Vessel (200 HP) ⁶	81	50%	2	50
Deck Generator (170 HP)	81	50%	1	47
Crane (35 Ton, 250 HP)	81	16%	2	45
Subtotal (Logarithmic Sum)				62
Cleanup and Restoration (140 Days)				
Pickup Truck (1-Ton, 410 HP)	75	40%	4	46
Motor Grader (250 HP)	85	40%	2	53
Backhoe (2x4, 68 HP)	78	40%	2	46
Water Truck (4,000 Gal, 300 HP)	72	40%	2	40
Skid Steer Loader (74 HP)	79	40%	1	44
Excavator (250 HP)	81	40%	1	46
Dozer (D6 Type, 250 HP)	82	40%	1	47
Pickup Truck (1/2-Ton, 395 HP)	75	40%	4	46
Dump Truck (10-12 Yd, 415 HP)	76	40%	2	44
Subtotal (Logarithmic Sum)				57

Notes:

- ¹ Assumed noise level for a flatbed truck.
- ² Assumed noise level for an auger drill rig.
- ³ Assumed noise level for a pneumatic tool.
- ⁴ Assumed noise level for a slurry trenching machine.
- ⁵ Assumed noise level for all other equipment greater than 5 HP per FHWA 2006.
- ⁶ Noise level for tugboat and support vessel (crew boat) obtained from Epsilon Associates, Inc. 2006.

FHWA RCNM = Federal Highway Administration Roadway Construction Noise Model

L_{eq} = average equivalent sound level

HP = horsepower

Lb = pound

Source: FHWA 2006, WSDOT 2020, and Epsilon Associates, Inc. 2006

L_{max} = maximum sound level

dBA = A-weighted decibel

Yd = yard

Gal = gallon

N/A = not applicable

5.1.2 Transmission Line Construction Noise

Similar to the new substation construction noise, the proposed 500 kV Interconnection and the proposed LSPGC 230 kV Overhead Segment construction noise levels were estimated based on the FHWA RCNM User's Guide (FHWA 2006). Input variables for the RCNM consist of the receptor/land use types, the equipment type, number of units operating concurrently, the acoustical usage factor for each piece of equipment, and the distance between the construction activity and sensitive receptor. No topographical or structural shielding was assumed in the construction noise analysis. For construction equipment where measured noise levels were unavailable, noise level information for similar equipment types was assumed. One cultural resource site (Hastings Adobe, depicted as R1 in **Figure 3**) is within one-quarter mile (1,320 feet) of the proposed LSPGC 230 kV Overhead Segment. R1 is approximately 555 feet south of the proposed LSPGC 230 kV Overhead Segment (**Figure 3**). There are no sensitive noise receptors within one-quarter mile (1,320 feet) of the proposed PG&E 500 kV Interconnection. The closest receptor, R1, to the interconnection line is approximately 1,950 feet south. For purposes of this analysis, the interconnection line construction impacts at 1,950 feet away was also evaluated.

The result of the construction noise analysis for the proposed PG&E 500 kV Interconnection and the proposed LSPGC 230 kV Overhead Segment are summarized in **Table 5-2** and **Table 5-3**, respectively. The table includes a list of equipment typically used for construction of interconnection/transmission lines by phase and the calculated A-weighted L_{eq} noise levels for each phase of construction based on the individual equipment's maximum noise levels, the equipment usage factor, and the distances between the work sites and the nearest receptor locations. LSPGC plan to use a Kaman K-Max (or similar model) for PG&E 500 kV Structure Installation and a Hughes 500 (or similar model) for PG&E 500 kV Conductor Installation and the LSPGC 230 kV Conductor Installation. The proposed PG&E 500 kV Interconnection construction noise levels at nearest receptor (1,950 feet away) range from 58 dBA during foundation installation to 72 dBA during structure installation. The proposed LSPGC 230 kV Overhead Segment construction noise levels at nearest receptor, R1 (555 feet away) range from 64 dBA during structure installation to 78 dBA during conductor installation. The primary source of noise during construction of the interconnection/transmission lines are helicopters used for structure installation and conductor installation.

Table 5-2. Proposed PG&E 500 kV Interconnection Construction Noise Levels by Phase

Construction Equipment Type	FHWA RCNM Construction Equipment L_{max} at 50 Feet (dBA)	Usage Factor	Estimated Number of Units	Calculated Noise Levels at Nearest Receptor (Residence), 1,950 feet from Construction Site, L_{eq} (dBA)
Foundation Installation (48 Days)				
Pressure Digger - Lo-Drill (Tracked, 275 HP) ¹	84	20%	1	45
Concrete Mixer Truck (425 HP)	79	40%	4	49
Pickup Truck (1-Ton, 410 HP)	75	40%	4	45
Water Truck (4,000 Gal, 300 HP)	72	40%	2	39
Dump Truck (10-12 Yd, 415 HP)	76	40%	2	43
Skid Steer Loader (74 HP)	79	40%	1	43
Forklift (10,000 Lb Reach, 130 HP)	88	20%	2	52
Crane (35 Ton, 250 HP)	81	16%	1	41
Loader (4-5 Yd, 230 HP)	79	40%	1	43
Rough Terrain Crane (185 HP)	81	16%	1	41
Motor Grader (250 HP)	85	40%	1	49
Dozer (D6 Type, 250 HP)	82	40%	1	46
Excavator (250 HP)	81	40%	1	45
Vibratory Roller (125 HP)	80	20%	1	41
Subtotal (Logarithmic Sum)				58
Structure Installation (21 Days)				
Crane (35 Ton, 250 HP)	81	16%	2	44
Helicopter – Heavy Duty (3,200 HP) ²	106	50%	1	72
Jet Fuel Truck (300 HP) ³	72	40%	1	36
Pickup Truck (1/2-Ton, 395 HP)	75	40%	2	42
Forklift (15,000 Lb Reach, 130 HP)	88	20%	1	49
Pickup Truck (1-Ton, 410 HP)	75	40%	2	42
Crane (200 Ton, 275 HP)	81	16%	1	41
844 Loader (417 HP)	79	40%	1	43
Water Truck (4,000 Gal, 300 HP)	72	40%	2	39
Subtotal (Logarithmic Sum)				72
Conductor Installation (20 Days)				
Helicopter – Light Duty (700 HP) ⁴	101	50%	1	66
Jet Fuel Truck (300 HP) ³	72	40%	1	36
Crane (35 Ton, 250 HP)	81	16%	6	49
Pickup Truck (1/2-Ton, 395 HP)	75	40%	4	45
Pickup Truck (1-Ton, 410 HP)	75	40%	4	45
Dozer (D8 Type, 200 HP)	82	40%	3	51

Noise and Vibration Impact Assessment Report

Construction Equipment Type	FHWA RCNM Construction Equipment L _{max} at 50 Feet (dBA)	Usage Factor	Estimated Number of Units	Calculated Noise Levels at Nearest Receptor (Residence), 1,950 feet from Construction Site, L _{eq} (dBA)
Wire Puller (175 HP) ⁵	85	50%	1	50
Water Truck (4,000 Gal, 300 HP)	72	40%	2	39
Wire Trailer/ Tensioner (175 HP) ⁵	85	50%	1	50
Subtotal (Logarithmic Sum)				66

Notes:

¹ Assumed noise level for an auger drill.

² Based on noise level (90 dBA) of a CH-47D helicopter flying at 100 feet aboveground level (Schomer et al 1988); adjusted to noise levels at 50 feet and assumed a 50 percent usage factor.

³ Assumed noise level for a water truck.

³ Based on noise level (94.5 dBA) of a MD900 helicopter flying at 100 feet aboveground level during landing (Falzarano S., and Levy L., 2007); adjusted to noise levels at 50 feet and assumed a 50 percent usage factor. Noise levels for MD500 model⁴ Assumed noise level for a water truck.

⁵ Assumed noise level for all other equipment greater than 5 horsepower per FHWA 2006

FHWA RCNM = Federal Highway Administration Roadway Construction Noise Model

L_{max} = maximum sound level

L_{eq} = average equivalent sound level

dBA = A-weighted decibel

HP = horsepower

Yd = yard

Lb = pound

Gal = Gallon

Source: FHWA 2006, WSDOT 2020, USDA 2024, Falzarano S., and Levy L., 2007.

Table 5-3. Proposed LSPGC 230 kV Overhead Segment Construction Noise Levels by Phase

Construction Equipment Type	FHWA RCNM Construction Equipment L _{max} at 50 Feet (dBA)	Usage Factor	Estimated Number of Units	Calculated Noise Levels at Nearest Receptor (Residence), 555 feet from Construction Site, L _{eq} (dBA)
Access Road Construction (16 Days)				
Pickup Truck (1/2-Ton, 395 HP)	75	40%	2	53
Pickup Truck (1-Ton, 410 HP)	75	40%	2	53
Motor Grader (250 HP)	85	40%	1	60
Dump Truck (10-12 Yd, 415 HP)	76	40%	2	54
Skid Steer Loader (74 HP)	79	40%	1	54
Water Truck (4,000 Gal, 300 HP)	72	40%	2	50
Dozer (D6 Type, 250 HP)	82	40%	1	57
Excavator (250 HP)	81	40%	1	56
Vibratory Roller (125 HP)	80	20%	1	52
Subtotal (Logarithmic Sum)				65
Foundation Installation (22 Days)				
Pressure Digger - Lo-Drill (Tracked, 275 HP) ¹	84	20%	1	56
Concrete Mixer Truck (425 HP)	79	40%	4	60
Pickup Truck (1-Ton, 410 HP)	75	40%	4	56
Water Truck (4,000 Gal, 300 HP)	72	40%	2	50
Dump Truck (10-12 Yd, 415 HP)	76	40%	2	54
Skid Steer Loader (74 HP)	79	40%	1	54
Forklift (10,000 Lb Reach, 130 HP)	88	20%	2	63
Crane (35 Ton, 250 HP)	81	16%	1	52
844 Loader (417 HP)	79	40%	1	54
Rough Terrain Crane (185 HP)	81	16%	1	52
Subtotal (Logarithmic Sum)				67
Structure Installation (24 Days)				
Crane (35 Ton, 250 HP)	81	16%	2	55
Pickup Truck (1/2-Ton, 395 HP)	75	40%	2	53
Forklift (15,000 Lb Reach, 130 HP)	88	20%	1	60
Pickup Truck (1-Ton, 410 HP)	75	40%	2	53
Crane (200 Ton, 275 HP)	81	16%	1	52
844 Loader (417 HP)	79	40%	1	54
Water Truck (4,000 Gal, 300 HP)	72	40%	2	50
Subtotal (Logarithmic Sum)				64
Conductor Installation (26 Days)				
Helicopter – Light Duty (700 HP) ²	101	50%	1	77

Construction Equipment Type	FHWA RCNM Construction Equipment L _{max} at 50 Feet (dBA)	Usage Factor	Estimated Number of Units	Calculated Noise Levels at Nearest Receptor (Residence), 555 feet from Construction Site, L _{eq} (dBA)
Jet Fuel Truck (300 HP) ³	72	40%	1	47
Crane (35 Ton, 250 HP)	81	16%	6	60
Pickup Truck (1/2-Ton, 395 HP)	75	40%	4	56
Pickup Truck (1-Ton, 410 HP)	75	40%	4	56
Dozer (D8 Type, 200 HP)	82	40%	3	62
Wire Puller (175 HP) ⁴	85	50%	1	61
Water Truck (4,000 Gal, 300 HP)	72	40%	2	50
Wire Trailer/ Tensioner (175 HP) ⁴	85	50%	1	61
Deck Barge (not a noise source)	N/A	N/A	1	0
Tugboat (3,300 HP) ⁵	87	50%	2	66
Support Vessel (200 HP) ⁵	81	50%	2	60
Deck Generator (170 HP) ⁵	81	50%	1	57
Anchor Winches (100 HP) ⁴	85	50%	4	67
Subtotal (Logarithmic Sum)				78

Notes:

¹ Assumed noise level for an auger drill.

² Based on noise level (94.5 dBA) of a MD900 helicopter flying at 100 feet aboveground level during landing (Falzarano S., and Levy L., 2007); adjusted to noise levels at 50 feet and assumed a 50 percent usage factor. Noise levels for MD500 model³ Assumed noise level for a water truck.

³ Assumed noise level for a water truck.

⁴ Assumed noise level for all other equipment greater than 5 horsepower per FHWA 2006

⁶ Noise level for tugboat and support vessel (crew boat) obtained from Epsilon Associates, Inc. 2006.

FHWA RCNM = Federal Highway Administration Roadway Construction Noise Model

L_{max} = maximum sound level

L_{eq} = average equivalent sound level

HP = horsepower

Yd = yard

Lb = pound

Gal = gallon

N/A = not applicable

dBA = A-weighted decibel

Source: FHWA 2006, WSDOT 2020, Falzarano S., and Levy L., 2007.

5.1.3 Construction Noise Levels from Other Land-based Components

The Proposed Project would generate construction noise levels from other land-based components such as:

- Proposed LSPGC 230 kV Underground Segment or 230 kV southern construction - open trenching methods of construction would be used to connect the submarine cables to an onshore utility vault. The cables would then continue in an underground configuration to designated locations near the fence of PG&E's existing Pittsburg Substation.
- Staging yard establishment and use.
- 12 kV distribution line extension to Collinsville Substation.
- Telecommunications line extension that goes through the underground utility vault and onto the LSPGC Collinsville Substation.

- Pittsburg Substation modifications – Vaca Dixon, Tesla, and Pittsburg Substation upgrades.

Construction noise levels for the components listed above were estimated based on the FHWA RCNM User's Guide (FHWA 2006). Input variables for the RCNM consist of the receptor/land use types, the equipment type, number of units operating concurrently, the acoustical usage factor for each piece of equipment, and the distance between the construction activity and sensitive receptor. No topographical or structural shielding was assumed in the construction noise analysis. For construction equipment where measured noise levels were unavailable, noise level information for similar equipment types was assumed. The proposed LSPGC 230 kV Underground Segment, telecommunications line extension, and Pittsburg Substation modifications are approximately 1,370 feet, 20 feet, and 2,000 feet, respectively from the nearest residential area on Halsey Court/Halsey Way (R5 in **Figure 3**). The 12 kV distribution line is approximately 590 feet from the nearest receptor, a cemetery along Abruzzini Hill Road, off Collinsville Road (R4 in **Figure 3**).

It is anticipated that approximately five staging areas would be used to support construction of the Collinsville Substation, new transmission lines, and interconnection lines. Three of the staging yards would be located north of Sacramento River in Solano County and would include use of helicopters; however, there are no human receptors within one-half mile of the staging areas. The other two staging yards are located south of the river, (adjacent to the Pittsburg Substation) in Contra Costa County and would not include use of helicopters. The staging yard directly west of the Pittsburg Substation is approximately 270 feet from the nearest residential area on Halsey Court. The staging yard directly east of the Pittsburg Substation is approximately 1,200 feet from the nearest residential area on Halsey Court.

The result of the construction noise analysis for the proposed LSPGC 230 kV Underground Segment, 12 kV distribution line, telecommunications line extension, Pittsburg Substation modifications, and staging yard establishment and use are summarized in **Tables 5-4 to 5-9**. The tables include a list of equipment typically used for each construction activity and the calculated A-weighted L_{eq} noise levels for the activity based on the individual equipment's maximum noise levels, the equipment usage factor, and the distances between the work site and the nearest receptor location. The predicted noise levels from the proposed LSPGC 230 kV Underground Segment, 12 kV distribution line extension construction, and the Pittsburg Substation modifications were all below 70 dBA at the nearest receptors (1,370 feet to 2,000 feet away). The noise level from construction of the telecommunications line extension was predicted to be 98 dBA at the nearest residential area located 20 feet away (single-family residences along Halsey Way and Marina Boulevard). The noise level from establishment and use of staging yards south of the river near the Pittsburg Station (without helicopters) is estimated to range from 61 dBA at residences 1,200 feet away to 74 dBA at residences 270 feet away. The noise level from establishment and use of staging yard north of the river (with helicopters) is estimated to be approximately 69 dBA at the nearest residential area located over one-half mile away.

In-water construction activities associated the LSPGC Submarine Segment would generate some noise in the immediate vicinity; however, there are no onshore human receptors within one-half mile of the LSPGC 230 kV Submarine Segment in the Sacramento River. Therefore, noise from in-water construction activities would result in no impact on onshore human receptors.

Table 5-4. Proposed LSPGC 230 kV Underground Segment Noise Levels by Phase

Construction Equipment Type	FHWA RCNM Construction Equipment L _{max} at 50 Feet (dBA)	Usage Factor	Estimated Number of Units	Calculated Noise Levels at Nearest Receptor (Residential Area), 1,370 feet from Construction Site, L _{eq} (dBA)
Southern Transition Approach (138 Days)				
Onshore Excavator (600 HP)	81	40%	1	48
Onshore End Loader (250 HP)	79	40%	1	46
Onshore Crane (180 HP)	81	16%	1	44
Onshore Crane (200 Ton, 275 HP)	81	16%	1	44
Onshore Vibratory Hammer (300 HP)	101	20%	1	65
Air Compressor (50 HP)	78	40%	1	45
Dump Truck (10-12 Yd, 415 HP)	76	40%	2	46
Onshore Dewatering Equipment (50 HP) ¹	85	50%	2	56
Onshore Trucks (300 HP) ²	72	40%	2	42
Onshore Impact Pile Driver	101	20%	1	65
Subtotal (Logarithmic Sum)				69
Substation Getaways (70 Days)				
Pickup Truck (1/2-Ton, 395 HP)	75	40%	4	48
Pickup Truck (1-Ton, 410 HP)	75	40%	4	48
Welding Truck (395 HP)	74	40%	2	44
Generator (36 HP)	81	50%	2	52
Crane (35 Ton, 250 HP)	81	16%	2	47
Forklift (10,000 Lb Reach, 130 HP)	88	20%	2	55
Forklift (15,000 Lb Reach, 130 HP)	88	20%	1	52
Loader (4-5 Yd, 74 HP)	79	40%	2	49
Wire Trailer/ Tensioner (175 HP) ¹	85	50%	1	53
Wire Puller (175 HP) ¹	85	50%	1	53
Skid Steer Loader (74 HP)	79	40%	2	49
Backhoe (2x4, 68 HP)	78	40%	2	48
Subtotal (Logarithmic Sum)				62

Notes:

¹ Assumed noise level for all other equipment greater than 5 horsepower per FHWA 2006.

² Assumed noise level for a water truck.

FHWA RCNM = Federal Highway Administration Roadway Construction Noise Model

L_{max} = maximum sound level

L_{eq} = average equivalent sound level

dBA = A-weighted decibel

HP = horsepower

Yd = yard

Lb = pound

Source: FHWA 2006, WSDOT 2020.

Table 5-5. 12 kV Distribution Line Extension Construction Noise Levels by Phase

Construction Equipment Type	FHWA RCNM Construction Equipment L _{max} at 50 Feet (dBA)	Usage Factor	Estimated Number of Units	Calculated Noise Levels at Nearest Receptor (Cemetery), 590 feet from Construction Site, L _{eq} (dBA)
12 kV Distribution Extension to Collinsville Substation (51 Days)				
Pickup Truck (1/2-Ton, 395 HP)	75	40%	2	53
Wire Trailer/ Tensioner (175 HP) ¹	85	50%	1	61
Wire Puller (175 HP) ¹	85	50%	1	61
Crane (35 Ton, 250 HP)	81	16%	2	55
Pickup Truck (1-Ton, 410 HP)	75	40%	2	53
Forklift (15,000 Lb Reach, 130 HP)	88	20%	2	63
Pressure Digger - Lo-Drill (Tracked, 275 HP) ²	84	20%	1	56
Dump Truck (10-12 Yd, 415 HP)	76	40%	2	54
Skid Steer Loader (74 HP)	79	40%	2	57
Concrete Mixer Truck (425 HP)	79	40%	4	60
Backhoe (2x4, 68 HP)	78	40%	1	53
Subtotal (Logarithmic Sum)				68

Notes:

¹ Assumed noise level for all other equipment greater than 5 horsepower per FHWA 2006.

² Assumed noise level for an auger drill.

FHWA RCNM = Federal Highway Administration Roadway Construction Noise Model

L_{max} = maximum sound level

L_{eq} = average equivalent sound level

dBA = A-weighted decibel

HP = horsepower

Yd = yard

Lb = pound

Source: FHWA 2006, WSDOT 2020.

Table 5-6. Telecommunications Line Extension Construction Noise Levels by Phase

Construction Equipment Type	FHWA RCNM Construction Equipment L _{max} at 50 Feet (dBA)	Usage Factor	Estimated Number of Units	Calculated Noise Levels at Nearest Receptor (Residential Area), 20 feet from Construction Site, L _{eq} (dBA)
Fiber Extension to Pittsburg Substation (103 Days)				
Crane (35 Ton, 250 HP)	81	16%	2	84
Forklift (10,000 Lb Reach, 130 HP)	88	20%	1	89
Excavator - Mini (170 HP)	81	40%	2	88
Dump Truck (10-12 Yd, 415 HP)	76	40%	3	85
Skid Steer Loader (74 HP)	79	40%	2	86
Trencher (75 HP) ¹	80	50%	2	88
Pickup Truck (1-Ton, 410 HP)	75	40%	3	84
Concrete Mixer Truck (425 HP)	79	40%	2	86
Wire Trailer/ Tensioner (175 HP) ²	85	50%	1	90
Wire Puller (175 HP) ²	85	50%	1	90
Water Truck (4,000 Gal, 300 HP)	72	40%	2	79
Subtotal (Logarithmic Sum)				98

Notes:

¹ Assumed noise level for a slurry trenching machine.

² Assumed noise level for all other equipment greater than 5 horsepower per FHWA 2006.

FHWA RCNM = Federal Highway Administration Roadway Construction Noise Model

L_{max} = maximum sound level

L_{eq} = average equivalent sound level

dBA = A-weighted decibel

HP = horsepower

Yd = yard

Lb = pound

Gal = gallon

Source: FHWA 2006, WSDOT 2020.

Table 5-7. Pittsburg Substation Modification Construction Noise Levels by Phase

Construction Equipment Type	FHWA RCNM Construction Equipment L _{max} at 50 Feet (dBA)	Usage Factor	Estimated Number of Units	Calculated Noise Levels at Nearest Receptor (Residential Area), 2,000 feet from Construction Site, L _{eq} (dBA)
Vaca Dixon, Tesla, and Pittsburg Substation Upgrades (78 Days)				
Pickup Truck (1/2-Ton, 395 HP)	75	40%	4	45
Pickup Truck (1-Ton, 410 HP)	75	40%	4	45
Welding Truck (395 HP)	74	40%	2	41
Crane (35 Ton, 250 HP)	81	16%	2	44
Forklift (15,000 Lb Reach, 130 HP)	88	20%	1	49
Man Lift (40-foot, 49 HP)	75	20%	3	41
Man Lift (120-foot, 74 HP)	75	20%	2	39
Subtotal (Logarithmic Sum)				53

Notes:

FHWA RCNM = Federal Highway Administration Roadway Construction Noise Model

L_{max} = maximum sound level

L_{eq} = average equivalent sound level

dBA = A-weighted decibel

HP = horsepower

Lb = pound

Source: FHWA 2006, WSDOT 2020.

Table 5-8. Staging Yard Establishment and Use Noise Levels without Helicopters – South of the River

Construction Equipment Type	Construction Equipment L_{max} at 50 Feet (dBA)	Usage Factor	Estimated Number of Units	Calculated Noise Levels at Nearest Receptor (Residential Area), 270 Feet from Construction Site, L_{eq} (dBA)	Calculated Noise Levels at Nearest Receptor (Residential Area), 1200 Feet from Construction Site, L_{eq} (dBA)
Staging Yard Establishment and Use (Duration of Project)					
Water Truck (4,000 Gal, 300 HP)	72	40%	1	53	40
Loader (4-5 Yd, 74 HP)	79	40%	1	60	47
Dump Truck (10-12 Yd, 415 HP)	76	40%	1	57	44
Motor Grader (250 HP)	85	40%	1	66	53
Scraper (410 HP)	84	40%	1	65	52
Vibratory Roller (157 HP)	80	20%	1	58	45
Pickup Truck (1/2-Ton, 395 HP)	75	40%	2	59	46
Generator (36 HP)	81	50%	2	66	53
Forklift (15,000 Lb Reach, 130 HP)	88	20%	2	69	56
Pickup Truck (1-Ton, 410 HP)	75	40%	2	59	46
844 Loader (417 HP)	79	40%	1	60	47
Semi-Truck (500 HP) ¹	74	40%	2	58	45
Subtotal (Logarithmic Sum)				74	61

Notes:

¹ Assumed noise level for a flatbed truck.

FHWA RCNM = Federal Highway Administration Roadway Construction Noise Model

L_{max} = maximum sound level

L_{eq} = average equivalent sound level

dBA = A-weighted decibel

HP = horsepower

Lb = pound

Source: FHWA 2006, WSDOT 2020.

Table 5-9. Staging Yard Establishment and Use Noise Levels with Helicopters – North of the River

Construction Equipment Type	FHWA RCNM Construction Equipment L _{max} at 50 Feet (dBA)	Usage Factor	Estimated Number of Units	Calculated Noise Levels at Nearest Receptor (Residential Area), 0.5 Mile from Construction Site, L _{eq} (dBA)
Staging Yard Establishment and Use (Duration of Project)				
Water Truck (4,000 Gal, 300 HP)	72	40%	1	34
Loader (4-5 Yd, 74 HP)	79	40%	1	41
Dump Truck (10-12 Yd, 415 HP)	76	40%	1	38
Motor Grader (250 HP)	85	40%	1	47
Scraper (410 HP)	84	40%	1	46
Vibratory Roller (157 HP)	80	20%	1	39
Pickup Truck (1/2-Ton, 395 HP)	75	40%	2	40
Generator (36 HP)	81	50%	2	47
Forklift (15,000 Lb Reach, 130 HP)	88	20%	2	50
Pickup Truck (1-Ton, 410 HP)	75	40%	2	40
844 Loader (417 HP)	79	40%	1	41
Semi-Truck (500 HP) ¹	74	40%	2	39
Helicopter – Heavy Duty (3,200 HP) ²	106	50%	1	69
Subtotal (Logarithmic Sum)				69

Notes:

¹ Assumed noise level for a flatbed truck.

² Based on noise level (90 dBA) of a CH-47D helicopter flying at 100 feet aboveground level (Schomer et al 1988); adjusted to noise levels at 50 feet and assumed a 50 percent usage factor.

FHWA RCNM = Federal Highway Administration Roadway Construction Noise Model

L_{max} = maximum sound level

L_{eq} = average equivalent sound level

dBA = A-weighted decibel

HP = horsepower

Lb = pound

Source: FHWA 2006, WSDOT 2020.

5.2 Construction Vibration

Temporary sources of groundborne vibration during grading, trenching, and other activities associated with the construction of the Collinsville Substation, proposed LSPGC 230 kV Overhead Segment, proposed PG&E 500 kV Interconnection, and other land-based components would be produced by the operation of heavy construction equipment. The Proposed Project equipment types most likely to create vibration include a drill rig, large bulldozer, loaded truck, vibratory roller, vibratory hammer, and impact pile driver. Using reference vibration levels at 25 feet, vibration from each construction equipment, except impact pile driver, can be estimated using the following formula (Caltrans 2020):

$$PPV_{\text{Equipment}} = PPV_{\text{Ref}} (25/D)^n \text{ (inches per second)}$$

Where:

PPV_{Ref} = reference PPV at 25 feet

D = distance from equipment to the receiver in feet

n = is a scaling factor (unitless), which is related to the attenuation rate through ground and is based on the soil conditions at the site (soil class). The value generally ranges from 1 to 1.5; the suggested value for “n” is 1.5 for the Proposed Project, which corresponds to competent soils that can be dug with shovel (e.g., agricultural lands) (Caltrans 2020).

Using reference vibration levels at 25 feet, vibration from impact pile driver can be estimated using the following formula (Caltrans 2020):

$$PPV_{\text{Impact Pile Driver}} = PPV_{\text{Ref}} (25/D)^n \times (E_{\text{equip}}/E_{\text{Ref}})^{0.5} \text{ (inches per second)}$$

Where:

PPV_{Ref} = reference PPV of impact pile driver at 25 feet

D = distance from impact pile driver to the receiver in feet

n = is a scaling factor (unitless), which is related to the attenuation rate through ground and is based on the soil conditions at the site (soil class). The value generally ranges from 1 to 1.5; the suggested value for “n” is 1.5 for the Proposed Project, which corresponds to competent soils that can be dug with shovel (e.g., agricultural lands) (Caltrans 2020).

E_{Ref} = 36,000 foot-pound (rated energy of reference impact pile driver)

E_{equip} = rated energy of impact pile driver in foot-pound.

Groundborne vibration levels generated by these pieces of equipment at a reference distance of 25 feet are shown in **Table 5-10**. The table also shows the distance at which noise generated by these pieces of equipment attenuate to the Caltran’s thresholds for building damage and human annoyance at residential uses. The construction equipment with the highest vibration source level (i.e., vibratory hammer) generates vibration levels of 0.65 PPV inch per second at a distance of 25 feet.

Table 5-10. Construction Equipment Vibration Noise Levels

Construction Equipment	Type of Vibration Source	Caltrans Reference Vibration Level at 25 feet, PPV (inches per second)	Distance to Attenuate to Caltrans' Threshold for Damage to Older Residential Structures ¹ (feet)	Distance to Attenuate to Caltrans' Threshold for a Barely Perceptible Human Response ² (feet)
Large Bulldozer	Continuous/ Frequent Intermittent	0.089	11	107
Drill Rig	Continuous/ Frequent Intermittent	0.089	11	107
Loaded Trucks	Continuous/ Frequent Intermittent	0.076	10	97
Vibratory Roller ³	Continuous/Frequent Intermittent	0.21	20	190
Vibratory Hammer ⁴	Continuous/Frequent Intermittent	0.65	42	405
Impact Pile Driver ⁵	Transient or Low-rate Repeated Impact	0.65	50	480

Notes:

¹ Caltrans threshold for damage to older structures is 0.3 inch per second, as provided in **Table 3-1**.

² Caltrans threshold for a barely perceptible human response is 0.01 inch per second, as provided in **Table 3-2**.

³ Only used during site development phase of the new substation construction and access road phase of the 230 kV new transmission line construction.

⁴ Only used during the southern transition approach phase of the 230 kV underground segment construction.

⁵ Assumed a 60,000-foot-pound impact pile driver; only used during the southern transition approach phase of the 230 kV underground segment construction.

Caltrans = California Department of Transportation

Source: Caltrans 2020

5.3 Operation and Maintenance Noise

5.3.1 Substation Operation and Maintenance Noise

The primary sources of noise associated with operation of the Collinsville Substation would be from six (6) single phase step-down autotransformers and their associated cooling fans (seventh autotransformer is a spare); two (2) heating, ventilation, and air conditioning (HVAC) units mounted on the sides of a control enclosure); eight (8) HVAC units mounted on the sides of two GIS halls (four HVAC units per GIS hall); and two 10-ohm series reactors per 230 kV line (triangle arrangement). The autotransformers shall be of mineral oil immersed type for ONAN/ONAF/ONAF2 (300/375/500 mega volt ampere [MVA]) multistage cooling.³

Sound emissions from each substation autotransformer and each series reactor were modeled as point sources located at a source height of 36 and 22 feet, respectively. Sound emissions from the control house HVAC and each GIS hall HVAC were modeled as vertical area sources located on the building walls at heights of 12.7 and 29.5 feet, respectively. The overall A-weighted sound power level for each substation equipment type was

³ ONAN = Oil Natural Air Natural; ONAF = Oil Natural Air Forced (first stage cooling); ONAF2 = ONAF = Oil Natural Air Forced (second stage cooling)

provided by LSPGC based on vendor sound-specifications. The un-weighted octave band sound power levels of the autotransformers and HVACs were estimated using adjustment factors in Handbook of Noise and Vibration (Crocker M.J. 2007). The equipment sound power levels used for the acoustical modeling of the Collinsville Substation are summarized in **Table 5-11**.

Table 5-11. Equipment Sound Power Levels at Collinsville Substation (Per Unit)

Substation Equipment Description	Height (feet)	Unweighted Sound Power Level in dB per Octave Band Frequency (Hz)									Total Sound Power Level (dBA)
		31.5	63	125	250	500	1000	2000	4000	8000	
Step-down Autotransformer (6 units operating; one spare)	36.0	96.6	102.6	104.6	99.6	99.6	93.6	88.6	83.6	76.6	100
HVAC units for control house (2 units in total)	12.7	55.8	55.8	63.8	67.8	73.8	70.8	65.8	60.8	60.8	75.0
HVAC units for GIS hall (8 units in total; 4 units per GIS hall)	29.5	68.8	68.8	76.8	80.8	86.8	83.8	78.8	73.8	73.8	88.0
Series reactor (6 units in total)	22.0	--	--	--	--	--	--	--	--	--	86.0

Notes:

- HVAC = heating, ventilation, and air conditioning
- GIS = Gas Insulated Switchgear
- dBA = A-weighted decibel
- MVA – mega volt ampere
- Hz = Hertz

Community noise levels associated with future operation of the Collinsville Substation were predicted using Cadna/A noise calculation software developed by DataKustik GmbH. This software implements International Organization for Standardization (ISO) 9613-2 international standard for sound propagation (Acoustics – Attenuation of Sound during Propagation Outdoors – Part 2: General Method of Calculation) for environmental noise sources and outdoor sound propagation. It is a comprehensive three-dimensional, ray-tracing model in which noise sources are assembled from a point, line, area, and/or vertical area components each emitting L_{WA} in octave bands or broadband A-weighted format. Distance losses, ground attenuation, terrain effects, wind effects, building shielding, attenuation through walls, and barrier/berm effects are computed in the Cadna/A model, and the resulting L_{PA} are computed at any number of receptors of interest.

Cadna/A starts with a Google Earth® base map of the area extending out approximately a mile from the facility. The model is capable of importing topography data for consideration of terrain shielding where appropriate. Elevation contours for the modeling domain were directly imported into Cadna/A, which allowed for consideration of terrain shielding where appropriate. The terrain height contour elevations for the modeling domain were generated from elevation information derived from the National Elevation Dataset developed by the United States Geological Survey. The model also accounts for the 10-foot-high prefabricated interlocking security wall that would be constructed around the Collinsville Substation site.

All calculations assumed favorable conditions for sound propagation per ISO 9613-2, corresponding to a moderate, well-developed ground-based temperature inversion, as might occur on a calm, clear night, or equivalently downwind propagation. Furthermore, the ISO 9613-2 standard assumes all receptors are downwind of every sound source simultaneously. In other words, the model assumes that each source propagates its maximum sound level in all directions at all times. This would likely overpredict upwind sound levels. Each receptor was modeled as a receiver at a height of 5.0 feet above ground level.

A temperature of 10 degrees Celsius (50 degrees Fahrenheit) and 70 percent relative humidity was used to calculate atmospheric absorption for the ISO 9613-2 model. These parameters were selected to minimize atmospheric attenuation in the 500 and 1000 Hz octave bands where the human ear is most sensitive, and thus provide conservative results. No meteorological correction was added to the results.

The land is primarily used for agricultural purposes and vegetation is mostly low-lying (i.e., little-to-no trees or foliage). All vegetation was excluded from the analysis to maintain conservativeness in the model. Ground attenuation is expected to be fairly high, due to the “soft ground” of surrounding areas but was assumed to be semi-reflective in the model for conservativeness. Ground absorption was set to a value of 0.5, where only half the available ground absorption is considered. Lastly, the model was programmed to include the sound contribution of two acoustical reflections off the Collinsville Substation buildings.

The Collinsville Substation layout, supplied by LSPGC, was used to establish relevant physical and positional characteristics of the substation equipment and buildings. Sound pressure levels were predicted for the identified receptors in the Cadna/A noise modeling program using source sound power levels at each octave-band frequency and the model input parameters and assumptions described above. Sound modeling was completed for the substation layout and the predicted daytime, nighttime, and day-night noise levels at each receptor (the logarithmic sum of sound levels from every source) are included in **Tables 5-12, 5-13, and 5-14**, respectively. **Figures 5, 6, and 7** contain graphical representations of the predicted daytime, nighttime, and day-night noise levels, respectively. Results of the modeled daytime, nighttime, and day-night noise levels from the operation of all substation equipment (excluding existing noise levels) at the nearest sensitive receptor (R1, cultural resource site) 1,790 feet away was estimated to be 38 dBA $L_{eq(day)}$, 38 dBA $L_{eq(night)}$, and 45 dBA L_{dn} (or CNEL), respectively.

Table 5-12. Daytime Substation Noise Modeling Results at Nearest Sensitive Receptor

Receptor ID	Receptor Type	Distance and Direction from Center of Collinsville Substation Facility	Predicted Daytime Noise Level at Sensitive Receptor, $L_{eq(day)}$ (dBA)	Predicted Daytime Noise Level Plus Existing Level of 48 dBA, $L_{eq(day)}$ (dBA) ¹	Daytime Noise Increase Above Existing Levels (dBA)
R1	Residential	1,790 feet southeast	38.2	48.4	0.4
R2	Residential	4,175 feet southwest	32.3	48.1	0.1
R3	Residential	4,280 feet west-southwest	32.4	48.1	0.1
R4	Cemetery	4,700 feet west-northwest	31.2	48.1	0.1

Notes:

¹ Summary of measured ambient (existing) daytime noise levels is provided in **Table 4-3**.

$L_{eq(day)}$ = average equivalent sound level during daytime (7:00 a.m. to 10:00 p.m.).

dBA = A-weighted sound level.

ID = Identification.

Table 5-13. Nighttime Substation Noise Modeling Results at Nearest Sensitive Receptor

Receptor ID	Receptor Type	Distance and Direction from Center of Collinsville Substation Facility	Predicted Nighttime Noise Level at Sensitive Receptor, $L_{eq(night)}$ (dBA)	Predicted Nighttime Noise Level Plus Existing Level of 42 dBA, $L_{eq(night)}$ (dBA) ¹	Nighttime Noise Increase Above Existing Levels (dBA)
R1	Residential	1,790 feet southeast	38.2	43.5	1.5
R2	Residential	4,175 feet southwest	32.3	42.4	0.4
R3	Residential	4,280 feet west-southwest	32.4	42.5	0.5
R4	Cemetery	4,700 feet west-northwest	31.2	42.3	0.3

Notes:

¹ Summary of measured ambient (existing) nighttime noise levels is provided in **Table 4-3**.

$L_{eq(night)}$ = average equivalent sound level during nighttime (10:00 p.m. to 7:00 a.m.).

dBA = A-weighted sound level.

ID = Identification.

Table 5-14. Day-Night Substation Noise Modeling Results at Nearest Sensitive Receptor

Receptor ID	Receptor Type	Distance and Direction from Center of Collinsville Substation Facility	Predicted Day-Night Noise Level at Sensitive Receptor, L_{dn} (dBA)	Predicted Day-Night Noise Level Plus Existing Level of 50 dBA, L_{dn} (dBA) ¹	Day-Night Noise Increase Above Existing Levels (dBA)
R1	Residential	1,790 feet southeast	44.6	51.1	1.1
R2	Residential	4,175 feet southwest	38.7	50.3	0.3
R3	Residential	4,280 feet west-southwest	38.8	50.3	0.3
R4	Cemetery	4,700 feet west-northwest	37.7	50.2	0.2

Notes:

¹ Summary of measured ambient (existing) day-night noise levels is provided in **Table 4-3**.

L_{dn} = A-weighted equivalent sound level for a 24-hour period with a 10-dB adjustment added to sound levels occurring during nighttime hours (10:00 p.m. to 07:00 a.m.).

dBA = A-weighted sound level.

ID = Identification.

5.3.2 Transmission Line Audible Noise During Operation and Maintenance

Corona-generated audible noise is the most common noise associated with transmission lines and is heard as a crackling or hissing sound. Corona is the breakdown of air into charged particles caused by electrical field at the surface of conductors. Once transmission lines are energized, the audible noise due to the line(s) would vary depending on weather conditions, with foul weather producing increased levels of audible noise over levels in fair weather. Corona-generated audible noise from the proposed LSPGC 230 kV Overhead Segment and the proposed PG&E 500 kV Interconnection was predicted using methods and equations developed by the Bonneville Power Administration (BPA) (Chartier and Larson 1977). The BPA audible noise calculation method (BPA method) is an empirical method developed from long-term statistical measurements on a number of full-scale operating or test transmission lines. It is specifically designed to calculate audible noise based on phase configuration, typical operating voltage, height above mean sea level, number of conductors in a bundle (if applicable), conductor diameter, and height above ground at maximum conductor sag. Information for the proposed PG&E 500 kV Interconnection was limited at the time this NVIA report was written. Therefore, a few assumptions were made based on physical and electrical characteristics of similar transmission lines. The physical and electrical characteristics (input data) used to calculate audible noise for the proposed LSPGC 230 kV Overhead Segment and the proposed PG&E 500 kV Interconnection are provided in **Table 5-15**.

Table 5-15. Physical and Electrical Characteristics of New Transmission and Interconnection Lines

Line Characteristics	Proposed LSPGC 230 kV Overhead Segment	Proposed PG&E 500 kV Interconnection	Unit
Average Voltage	230	500	Kilovolt
Circuit Configuration	Double	Single	--
Average Current	2,100	Data not available	Ampere
Frequency of AC Supply	60	60	Hertz
Electric Phasing	A C'	B	--
	B B'	A C	
	C A'		
Phase Spacing	39.4 to 45.9H, 26.2V	45.9H, 32.8V	feet
Horizontal Distance of Conductor Bundle from Center of Tower	A (-19.7) C'(19.7)	B (0.0)	feet
	B (-23.0) B'(23.0)	A (-29.5) C (29.5)	
	C (-19.7) A'(19.7)		
Height of Conductor Bundle at Tower	A (118.1) C' (118.1)	B (124.7)	feet
	B (91.9) B' (91.9)	A (91.9) C (91.9)	
	C (65.6) A' (65.6)		
Height of Conductor Bundle at Mid-span	A (85.3) C' (85.3)	B (65.6)	feet
	B (59.1) B'(59.1)	A (32.8) C (32.8)	
	C (32.8) A'(32.8)		
Sub-conductor Spacing	18	18	inches
Sub-conductor Diameter	1.16	1.16	inches
Number of Sub-conductors in Bundle	2	2	--
Centerline Distance to Edge of ROW	60.0	60.0	feet
Average Altitude	200	200	feet
Receptor Height	5	5	feet

Notes:

H = horizontal spacing between conductor bundles

V = vertical spacing between phases

kV = kilovolt

AC = alternating current

ROW = right-of-way

The audible noise profiles in fair and foul weather at midspan were calculated for the proposed LSPGC 230 kV Overhead Segment and the proposed PG&E 500 kV Interconnection using the BPA method. The analysis evaluates the L₅₀ audible noise levels assuming a rain rate of 1 millimeter per hour (0.04 inch per hour), which is the default rate for the BPA audible noise calculations.

The audible noise level for the proposed LSPGC 230 kV Overhead Segment with a conductor ground clearance of at least 33 feet and at an average altitude of 200 feet above sea level were calculated and plotted in **Figure 8**. A lower voltage or lower altitude would result in lower audible noise. The audible noise level in fair weather at the edges of the right-of-way (ROW) is approximately 9 dBA increasing to approximately 11 dBA within the ROW under the line (**Figure 8 Fair Weather**). In foul weather, the audible noise level from the line increase to approximately 34 dBA at the edges of the ROW and approximately 36 dBA under the line within the ROW (**Figure 8 Foul Weather**). One isolated residence is within one-quarter mile (1,320 feet) of the proposed LSPGC 230 kV Overhead Segment (i.e., 555 feet south of the line) (**Figure 3**).

The audible noise level for the proposed PG&E 500 kV Interconnection with a conductor ground clearance of at least 33 feet and at an average altitude of 200 feet above sea level were calculated and plotted in **Figure 9**. The audible noise level in fair weather at the edges of the ROW is approximately 38 dBA increasing to approximately 41 dBA within the ROW under the line (**Figure 9 Fair Weather**). In foul weather, the audible noise level from the line increases to approximately 63 dBA at the edges of the ROW and approximately 66 dBA under the line within the ROW (**Figure 9 Foul Weather**). There are no sensitive noise receptors within one-quarter mile (1,320 feet) from the proposed PG&E 500 kV Interconnection (**Figure 3**). As shown in **Figures 8 and 9**, the proposed PG&E 500 kV Interconnection would be the primary source of possible audible noise from the lines involved in the Proposed Project since lower voltage lines such as the proposed LSPGC 230 kV Overhead Segment contribute little-to-no audible noise under fair weather conditions. Although the contribution of the proposed LSPGC 230 kV Overhead Segment may increase in foul weather, the audible noise in foul weather from the lower voltage line (i.e., the proposed LSPGC 230 kV Overhead Segment) is less than from the proposed PG&E 500 kV Interconnection.

6 Impacts Significance Analysis

The significance of noise and vibration impacts from the Proposed Project's construction, operation, and maintenance have been analyzed by using the CEQA guidelines, Appendix G (as amended in December 2019), Environmental Checklist. The impact questions related to noise (and vibration) in the CEQA Environmental Checklist are discussed below:

a) Would the project result in the generation of a substantial temporary or permanent increase in ambient noise level 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?

Construction

Less Than Significant Impact. Short-term noise level increases from construction activities would cause significant impacts if the activities would conflict with local policies or standards. Noise from the Proposed Project construction activities is exempt from applicable standards during daytime hours. Any construction activities taking place outside the daytime hours would be considered to result in a significant impact if resulting noise levels at the receptors would exceed the Sacramento County and Contra Costa County exterior noise standard of 50 dBA L_{eq} for nighttime. The noise ordinances in Solano County and City of Pittsburg do not establish numerical noise-level limits related to construction noise. Although there are no quantitative local noise level standards applicable to the Proposed Project construction, a quantitative analysis of its construction noise is included in this analysis for informational purposes.

Proposed Project construction is scheduled to begin in early 2026 and take approximately 24 to 30 months to complete. The Proposed Project includes construction occurring on land and in water. The construction of in-water transition structures is anticipated to take approximately 6 months and installation of the submarine cables is anticipated to take approximately 7 months. In-water work would be restricted to between July 1 and November 30 and may require up to 2 years to complete within the work windows. Land-based construction would occur year-round or as authorized by permits and authorizations. Per the CAISO technical specifications, the Proposed Project is required to be energized by June 1, 2028.

Construction of the Proposed Project would generate noise that would temporarily increase ambient noise levels. The Proposed Project construction noise would be generated by the operation of on-site construction equipment such as water trucks, graders, loaders, excavators, and drill rigs, as well as from on-road sources such as vehicle trips transporting workers, equipment, and materials to and from the Proposed Project site. The magnitude of the impact at receptors would depend on the type of construction activity, equipment being used, duration of the construction phase, distance between the noise source and receiver, the presence of intervening structures that enhance attenuation, and the existing ambient noise levels at the receptors. Construction noise levels generated by equipment would also vary depending on several factors such as the type and age of equipment, specific equipment manufacture and model, the operations being performed, and the overall condition of the equipment and exhaust system mufflers.

Construction of the Collinsville Substation would consist of several phases, including survey, site development, below grade construction, above grade construction, commissioning and testing, and cleanup and restoration. Construction of the new overhead transmission and interconnection lines would consist of several phases, including access road construction, foundation installation, structure installation, and conductor installation. Near the southern edge of the Sacramento River and San Joaquin River confluence, open trenching methods of construction would be used to connect the submarine cables to an onshore underground utility vault. Each

construction phase would occur sequentially for a few months, and construction impacts were assessed for the nearest sensitive receptor to the work sites; impacts to sensitive receptors further away would be reduced. Details of the method and assumptions used to predict the Proposed Project construction noise, including the construction noise model (FHWA RCNM) and the reference L_{max} for each construction equipment at 50 feet, are discussed in Section 5.1. The result of the construction noise analysis by phase for the Collinsville Substation site, proposed PG&E 500 kV Interconnection, and the proposed LSPGC 230 kV Overhead Segment are summarized in **Tables 5-1, 5-2, and 5-3**, respectively. The result of the construction noise analysis by phase for the other land-based components are summarized in **Tables 5-4 through 5-9**. The noise modeling conservatively assumed that all construction equipment within each phase would operate simultaneously for the duration of that phase; in reality, all construction equipment would not occur concurrently. The new substation construction noise levels at nearest receptor, R1 (a cultural resource site located 1,790 feet away) range from 43 dBA during survey to 62 dBA during below grade construction and commissioning and testing. Construction noise levels at the other sensitive receptors (R2 [residential area], R3 [residential area], and R4 [cemetery]) located further away would be lower. The proposed PG&E 500 kV Interconnection construction noise levels at nearest receptor (1,950 feet away) range from 58 dBA during foundation installation to 72 dBA during structure installation. The proposed LSPGC 230 kV Overhead Segment construction noise levels at nearest receptor, R1 (555 feet away) range from 64 dBA during structure installation to 78 dBA during conductor installation. The predicted noise levels from the proposed LSPGC 230 kV Underground Segment, 12 kV distribution line extension construction, and the Pittsburg Substation modifications were all below 70 dBA at the nearest receptors (1,370 to 2,000 feet away). The primary source of noise during construction of the interconnection/transmission lines are helicopters used for structure installation and conductor installation. The noise level from construction of the telecommunications line extension was predicted to be 98 dBA at the nearest residential area located 20 feet away (single-family residences along Halsey Way and Marina Boulevard). The noise level from establishment and use of staging yards (without helicopters) south of the river near Pittsburg Substation is estimated to range from 61 dBA at residences 1,200 feet away to 74 dBA at residences 270 feet away. The noise level from establishment and use of staging yards (with helicopters) north of the river is estimated to be approximately 69 dBA at the nearest residential area located more than 0.5 mile away.

In-water construction activities associated the LSPGC Submarine Segment would generate some noise in the immediate vicinity; however, there are no onshore human receptors within one-half mile of the LSPGC 230 kV Submarine Segment in the Sacramento River. Therefore, noise from in-water construction activities would result in no impact on onshore human receptors.

Construction activities at the Proposed Project site would generally be scheduled to occur during daylight hours 6 days per week (Monday through Saturday). Night work is expected for submarine cable installation, which will occur 24 hours per day, 7 days per week until complete.

Although the Proposed Project construction would increase noise above existing ambient levels at the nearest receptors (particularly during construction of the telecommunications line extension in the city of Pittsburg), the increases would be temporary, intermittent, and occur only during daylight hours when elevated noise is more tolerable. Additionally, noise from construction activities in Sacramento, Solano, and Contra Costa counties and City of Pittsburg is exempt from applicable standards during daytime hours. Therefore, the Proposed Project construction noise would result in a less-than-significant impact.

In addition to noise generated by on-site construction equipment, construction-related vehicle trips would increase noise levels along roadways leading to the Proposed Project site. Access to the Collinsville Substation site for construction equipment, supplies, and workers would likely be from Sacramento via Highway 80. A permanent

access road to the new substation would also be constructed. The peak vehicle trips would likely occur during the earthwork and grading of the Proposed Project (e.g., site development and below-grade construction activities) due to the removal or importation of fill. Peak vehicle round trips during the new substation construction period is expected to be approximately 100 per day. During the new transmission line and interconnection line construction period, peak vehicle round trips is expected to be approximately 156 per day.

Other periods of the Proposed Project construction would have lower daily vehicle trips, and therefore would have correspondingly lower noise levels. The addition of 216 construction-related daily vehicle trips on Highway 80 would increase ambient traffic noise levels along the highway, but any increase would be minimal, as these trips would be spread out throughout the day. Therefore, the Proposed Project construction traffic noise would result in a less-than-significant impact.

Operation and Maintenance

Less Than Significant Impact. Long-term operation and maintenance noise impacts would be considered significant if the Proposed Project-related noise would exceed the County (Solano, Sacramento, and Contra Costa) exterior noise standards of 55 dBA L_{eq} or L_{50} during daytime hours (i.e., 7:00 a.m. to 10:00 p.m.) or 50 dBA L_{eq} or L_{50} during nighttime hours (i.e., 10:00 p.m. to 7:00 a.m.). For most common noise sources, L_{50} can be interpreted as close to the L_{eq} metric. The General Plan for Solano County, Sacramento County and Contra Costa County specifies CNEL-based community noise exposure levels that consider the contributions of daytime and nighttime noise levels. The maximum allowable noise exposure level for residential land use is 60 dBA CNEL. For typical community noise environments, the CNEL and L_{dn} levels are nearly always within 1 dB of each other and, therefore, are commonly used interchangeably (as would be the case in this NVIA report). The General Plan for the City of Pittsburg considers a 3 dB increase in ambient noise to be just noticeable, a 5 dB increase as a significant impact, and a 10 dB increase to almost always cause an adverse community reaction.

The primary sources of noise associated with operation of the Collinsville Substation would be from six (6) single phase step-down autotransformers and their associated cooling fans (seventh autotransformer is a spare); two (2) HVAC units mounted on the sides of a control enclosure; eight (8) HVAC units mounted on the sides of two GIS halls (four HVAC units per GIS hall); and two 10-ohm series reactors per 230 kV line (triangle arrangement). Details of the method and assumptions used to predict the new substation operational noise, including the three-dimensional industrial noise model (Cadna/A) and the sound power level of each source type, are discussed in Section 5.3.1. The Collinsville Substation operational noise modeling results are presented in **Tables 5-12 to 5-14** and shown visually as noise contours in **Figures 5 to 7**. The results of the modeled daytime, nighttime, and day-night noise levels from the operation of all substation equipment (excluding existing noise levels) at the nearest sensitive receptor (R1, a cultural resource site) 1,790 feet away was estimated to be 38 dBA $L_{eq(day)}$, 38 dBA $L_{eq(night)}$, and 45 dBA L_{dn} (or CNEL), respectively. The results indicate that predicted noise levels for the Collinsville Substation would be below Solano, Sacramento, and Contra Costa County's exterior noise standards of 55 dBA L_{50} (or L_{eq}) and 50 dBA L_{50} (or L_{eq}) during daytime and nighttime hours, respectively. The predicted operational noise levels would also be below the Solano, Sacramento, and Contra Costa County General Plan allowable noise exposure level of 60 dBA CNEL (or L_{dn}) for residential land uses. **Tables 5-12 to 5-14** also show that noise increases above existing ambient levels at the nearest receptor, R1 (1,790 feet away) would range from 0.4 to 1.5 dB, which is not perceptible to the residential community as indicated in the General Plan for the City of Pittsburg. Therefore, noise associated with the Collinsville Substation operational equipment would result in a less-than-significant impact.

Corona-generated audible noise in fair and foul weather from the proposed LSPGC 230 kV Overhead Segment and the proposed 500 kV Interconnection was predicted using methods and equations developed by the BPA (Chartier and Larson 1977). The BPA method is specifically designed to calculate audible noise based on phase configuration, typical operating voltage, height above mean sea level, number of conductors in a bundle (if applicable), conductor diameter, and height above ground at maximum conductor sag. The predicted audible noise level for the new 230 kV transmission line in fair weather at the edges of the ROW is approximately 9 dBA increasing to 11 dBA within the ROW under the line (**Figure 8 Fair Weather**). In foul weather, the audible noise level from the proposed LSPGC 230 kV Overhead Segment increases to approximately 34 dBA at the edges of the ROW and 36 dBA under the line within the ROW (**Figure 8 Foul Weather**). The proposed LSPGC 230 kV Overhead Segment audible noise level at nearest receptor (555 feet away) is approximately 0 dBA in fair weather and 25 dBA in foul weather; both levels are below the existing daytime and nighttime noise levels of 48 dBA and 42 dBA, respectively. For the proposed PG&E 500 kV Interconnection, audible noise level in fair weather at the edges of the ROW is approximately 38 dBA increasing to 41 dBA within the ROW under the line (**Figure 9 Fair Weather**). In foul weather, the audible noise level from the proposed PG&E 500 kV Interconnection increases to approximately 63 dBA at the edges of the ROW and 66 dBA under the line within the ROW (**Figure 9 Foul Weather**). Although noise levels at the ROW of the proposed PG&E 500 kV Interconnection are much higher than that for the proposed LSPGC 230 kV Overhead Segment, there are no sensitive noise receptors within one-quarter mile (1,320 feet) from the proposed PG&E 500 kV Interconnection. Additionally, existing sound levels under foul (wet) weather conditions would be higher than the levels measured under fair (dry) weather conditions. Consequently, under foul weather conditions, the increased existing sound levels (i.e., from rainfall) are expected to mask most of the audible noise from the transmission and interconnection lines. Therefore, noise from the proposed LSPGC 230 kV Overhead Segment and the proposed PG&E 500 kV Interconnection would not be audible at the nearest sensitive receptors and as such, would result in no impact.

The proposed LSPGC Collinsville Substation would be unstaffed and operated remotely. System-wide assessments would be accomplished primarily through visual inspections, which would consist of monthly observations of the substation and related equipment. LSPGC would regularly inspect, maintain, and repair the Proposed Project following construction. Typical operations and maintenance activities would involve routine inspections and preventive maintenance to ensure service reliability, as well as emergency work to maintain or restore service. The routine on-site inspection and maintenance activities would be conducted by small, specialized teams at the Proposed Project site. Such activities would result in a negligible number of vehicle trips per year (light utility trucks) that would not be anticipated to have a substantive impact on traffic noise along roadways in the Proposed Project vicinity. PG&E would be responsible for maintaining and operating its respective portions of the Proposed Project. Considering the small number of infrequent trips associated with the Proposed Project's operation, inspection, and maintenance, the Proposed Project is anticipated to have a negligible impact on roadside traffic noise levels in the vicinity.

On-site activities are not anticipated to result in noise levels in excess of existing wind farms, agricultural lands, and electrical infrastructure operations on the Proposed Project site and surrounding properties. Therefore, on-site maintenance is not anticipated to result in a substantial increase in noise levels.

2. Would the project result in the generation of excessive groundborne vibration or groundborne noise levels?

Construction

Less Than Significant Impact. Groundborne vibration or noise levels from construction activities are considered significant if they cause damage to structures, or cause sleep disturbance if such activities occur at night near residential areas. There are no vibration sensitive structures identified in the Proposed Project's immediate vicinity. Construction activities would take place mostly during daylight hours, and the nearest noise sensitive receptor (R1, a cultural resource site) to the Collinsville Substation site, proposed LSPGC 230 kV Overhead Segment, and the proposed PG&E 500 kV Interconnection is 1,790 feet, 555 feet, and 1,950 feet away, respectively. The nearest receptors to the other land-based components range from 20 feet (telecommunications line extension construction) to 2,000 feet (Pittsburg Substation modifications).

The six pieces of equipment types most likely to create vibration during the Proposed Project construction include a drill rig, large bulldozer, loaded truck, vibratory roller, vibratory hammer, and impact pile driver. Details of the method and assumptions used to predict the Proposed Project construction vibration, including reference vibration levels at 25 feet for the six pieces of equipment, are discussed in Section 5.2. Vibration levels generated by the six pieces of equipment at a reference distance of 25 feet are shown in **Table 5-10**. The table also shows the distance at which noise generated by these pieces of equipment attenuate to the Caltrans' thresholds for building damage and human annoyance at residential uses.

As shown in **Table 5-10**, groundborne vibration attenuates rapidly with distance from the construction work sites. The Caltrans' vibration threshold for building damage (older residential structures) is 0.3 PPV inch per second; vibration from construction equipment would attenuate to below this level within 50 feet of the source and would not cause any cosmetic or structural damage to the nearest structure 555 feet away (except for single-family residences located 20 feet from telecommunications line extension construction). For the telecommunications line extension construction, the only piece of equipment most likely to create vibration is loaded trucks (i.e. there would be no bulldozer, drill rig, vibratory roller, vibratory hammer, or impact pile driver). **Table 5-10** shows that vibration from loaded trucks would attenuate to below the vibration damage criterion (0.3 PPV inch per second) within 10 feet of the source and would not cause any cosmetic or structural damage to the nearest structures 20 feet away.

The Caltrans' threshold for human annoyance at residential uses is 0.01 inch per second; vibration from construction equipment would attenuate to below this level within 480 feet of the source and would not be perceptible at the nearest sensitive receptor 555 feet away (except for single-family residences located 20 feet from telecommunications line extension construction). For the telecommunications line extension construction, the only piece of equipment most likely to create vibration is loaded trucks. **Table 5-10** shows that vibration from loaded trucks would attenuate to below the vibration annoyance criterion (0.01 PPV inch per second) within 97 feet of the source and could be strongly perceptible to people living in single-family residences 20 feet away. To minimize vibration annoyance impacts from loaded trucks, the telecommunications line extension work would be conducted during the daytime when most people are not in the area (e.g., at work). Consequently, the loaded trucks would not operate at night and as such, would not cause sleep disturbance near the residential area. Because of distance attenuation and prohibition of nighttime work, the Proposed Project construction would not have the potential to generate significant short-term groundborne vibration or groundborne noise at the nearest sensitive receptors. Therefore, construction-related vibration and groundborne noise associated with the Proposed Project would result in a less-than-significant impact.

Operation and Maintenance

No Impact. The Proposed Project would not include the use of any large rotating equipment during its operation that would introduce any new sources of perceivable groundborne vibration. In addition, operation and maintenance activities at the Proposed Project site would not require the use of heavy equipment that would generate high vibration levels. Therefore, the Proposed Project has no potential to generate groundborne vibration levels greater than the significance criteria for structural damage to older residential structure (0.3 inch per second) or for human annoyance (0.01 inch per second). Therefore, vibration from the Proposed Project's operation and maintenance would result in no impact.

3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Proposed Project site is not located within the vicinity of a private airstrip or within 2 miles of a public airport or public use airport. Consequently, the Proposed Project would not expose people residing or working at the site to excessive noise levels from aircraft. Therefore, there would be no impact.

7 Conclusions

The findings of this NVIA report are that under CEQA, the noise impact associated with the construction, operation, and maintenance of the Proposed Project would be less than significant. Similarly, vibration impact associated with the construction of the Proposed Project would be less than significant; however, vibration from the Proposed Project's operation and maintenance would result in no impact.

8 References

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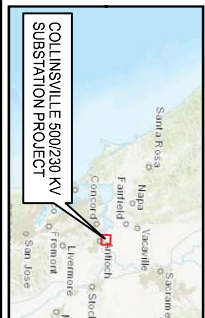
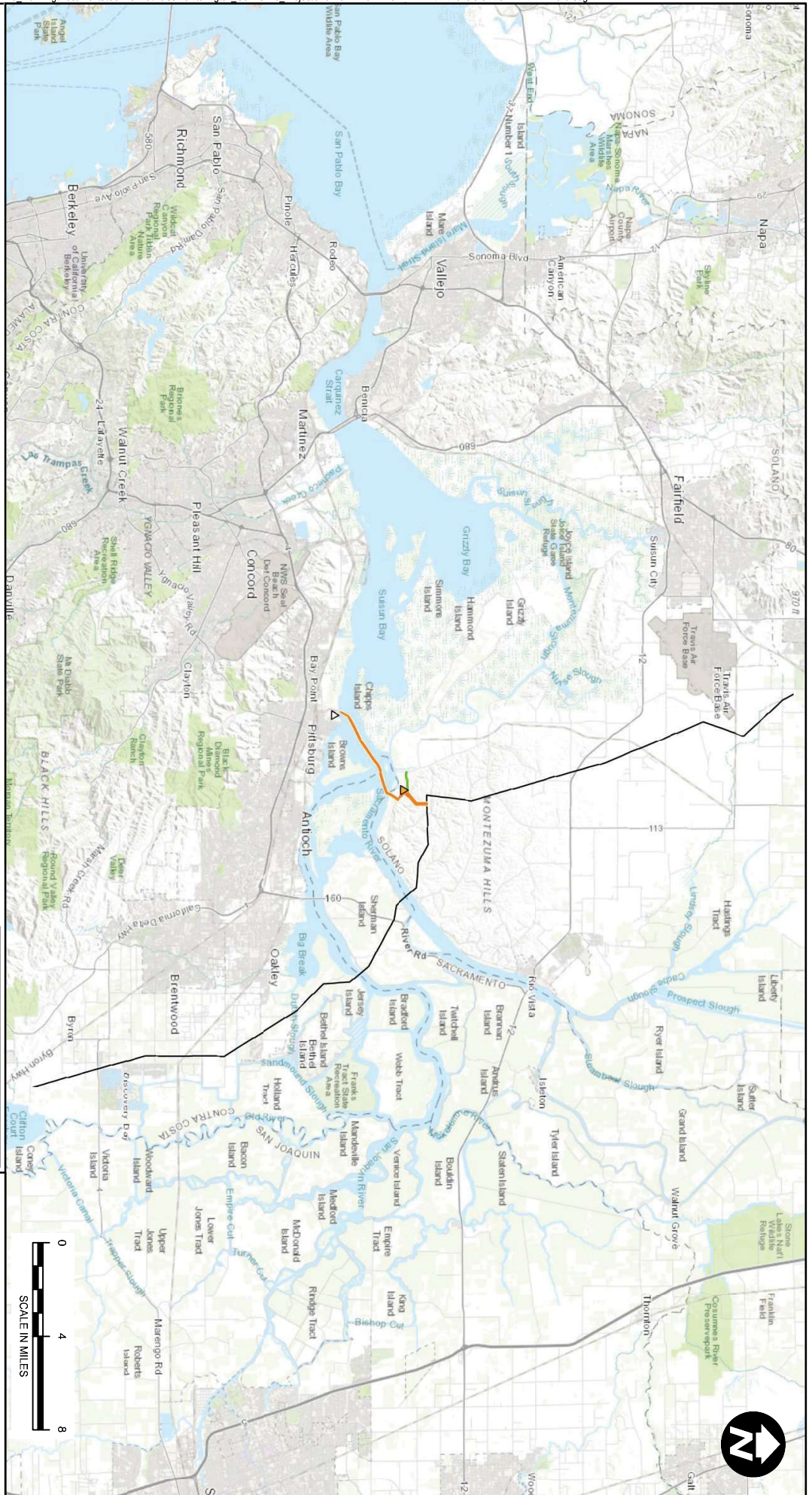
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Figures

LEGEND

- Proposed LSPGC Collinsville Substation
- Existing PG&E Pilsbury Substation
- Proposed Project Transmission Lines
- Proposed PG&E 12 kV Overhead Distribution Line
- Existing PG&E West Dixon-Tesla Transmission Line



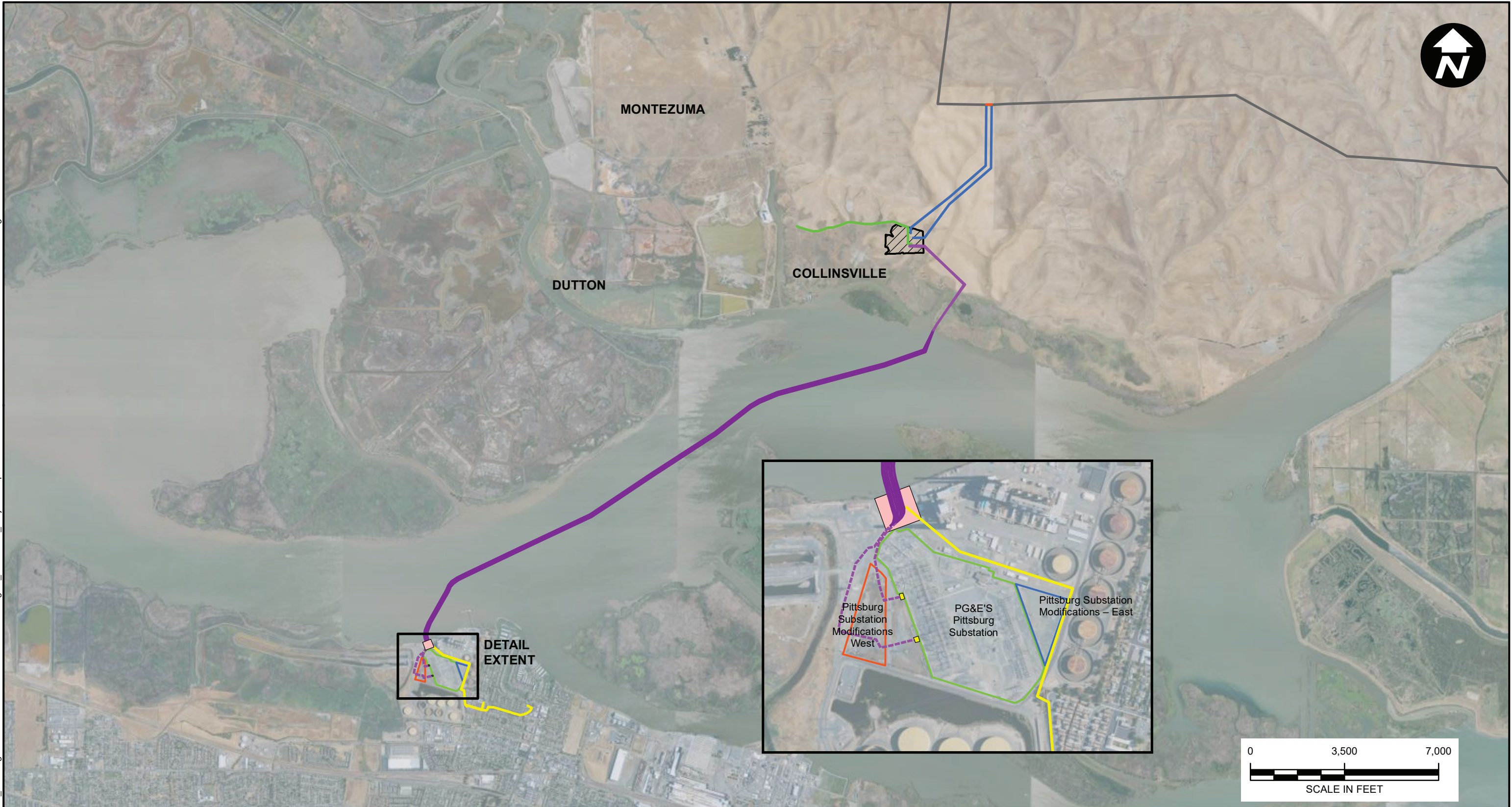
IS POWER GRID CALIFORNIA, LLC
 COLLINSVILLE 500/230 KV SUBSTATION PROJECT

PROJECT OVERVIEW MAP

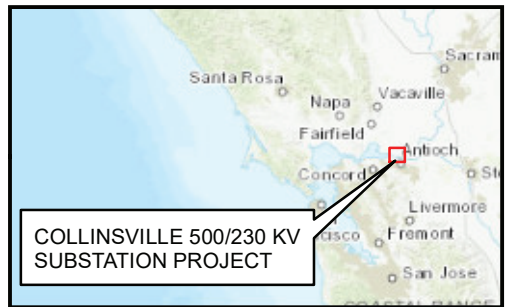
ARCADIS | FIGURE 1



CITY: NOVI, MI DIV: ENV DB: TRY PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane California II FIPS 0402 Feet
 D:\GIS\Project Files\LS_Power\Collinsville_Manning\Documents\Collinsville\NoiseMonitoring\02_Collinsville_ProjectComponents.mxd PLOTTED: 3/11/2024 1:13:27 PM BY: TYarborough



LEGEND			
	Proposed LSPGC Collinsville Substation Site		Vault
	Pittsburg Substation Modifications - East		Riser
	Pittsburg Substation Modifications - West		Proposed LSPGC 230 kV Underground Transmission Cable
	PG E's Pittsburg Substation		Existing PG E 500kV Overhead Transmission Line To Be Removed
	Existing PG E 500 kV Overhead Transmission Line		Telecommunications Line
	Proposed LSPGC 230 kV Overhead Transmission Line		
	Proposed LSPGC 230 kV Submarine Transmission Cable		
	Proposed PG E 12 kV Overhead Distribution Line		
	Proposed PG E 500 kV Overhead Interconnection		



LS POWER GRID CALIFORNIA, LLC
 COLLINSVILLE 500/230 KV SUBSTATION PROJECT

PROJECT COMPONENTS MAP

ARCADIS

FIGURE
2

CITY: NOVATO, MI; DIV: ENV; DB: TRY; PIC: PM; TM: TR; PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane California II FIPS 0402 Feet; DIGIS/Project Files/LS_Power/Collinsville_Manning/Documents/Collinsville_Noise/Monitoring/003_Collinsville_Noise/Monitoring/Layout.mxd; PLOTTED: 11/27/2023 5:04:53 PM BY: Tyabrough



- LEGEND**
- SENSITIVE NOISE RECEPTORS
 - NOISE MEASUREMENT LOCATION
 - TRANSMISSION LINE
 - PROPOSED COLLINSVILLE SUBSTATION SITE
 - EXISTING PG&E PITTSBURG SUBSTATION



LS POWER GRID CALIFORNIA, LLC
COLLINSVILLE 500/230 KV SUBSTATION PROJECT

**NOISE MEASUREMENT LOCATIONS AND
NEAREST SENSITIVE RECEPTORS**


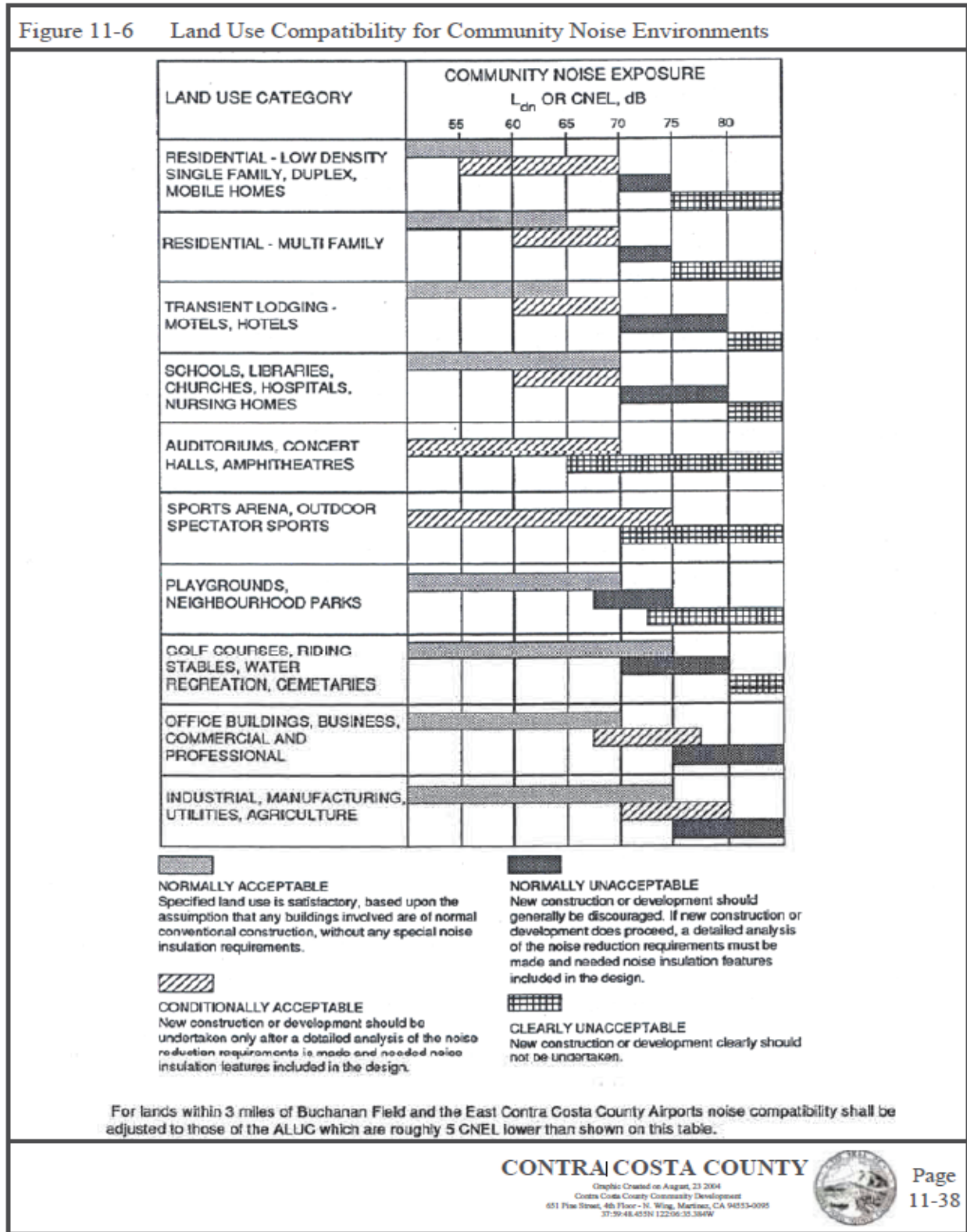


FIGURE
3

Figure 4: Land Use Compatibility for Community Noise Environments



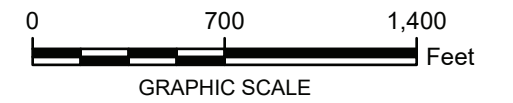
Source: Contra Costa County 2010

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LEGEND:

- RECEPTOR
- DAYTIME NOISE CONTOUR (dBA)
 - 45
 - 50
 - 55
 - 60
 - 65
- SITE BOUNDARY



NOTE:

1. BASEMAPPING IMAGERY OBTAINED FROM GOOGLE EARTH PRO DATED 8/30/2023.

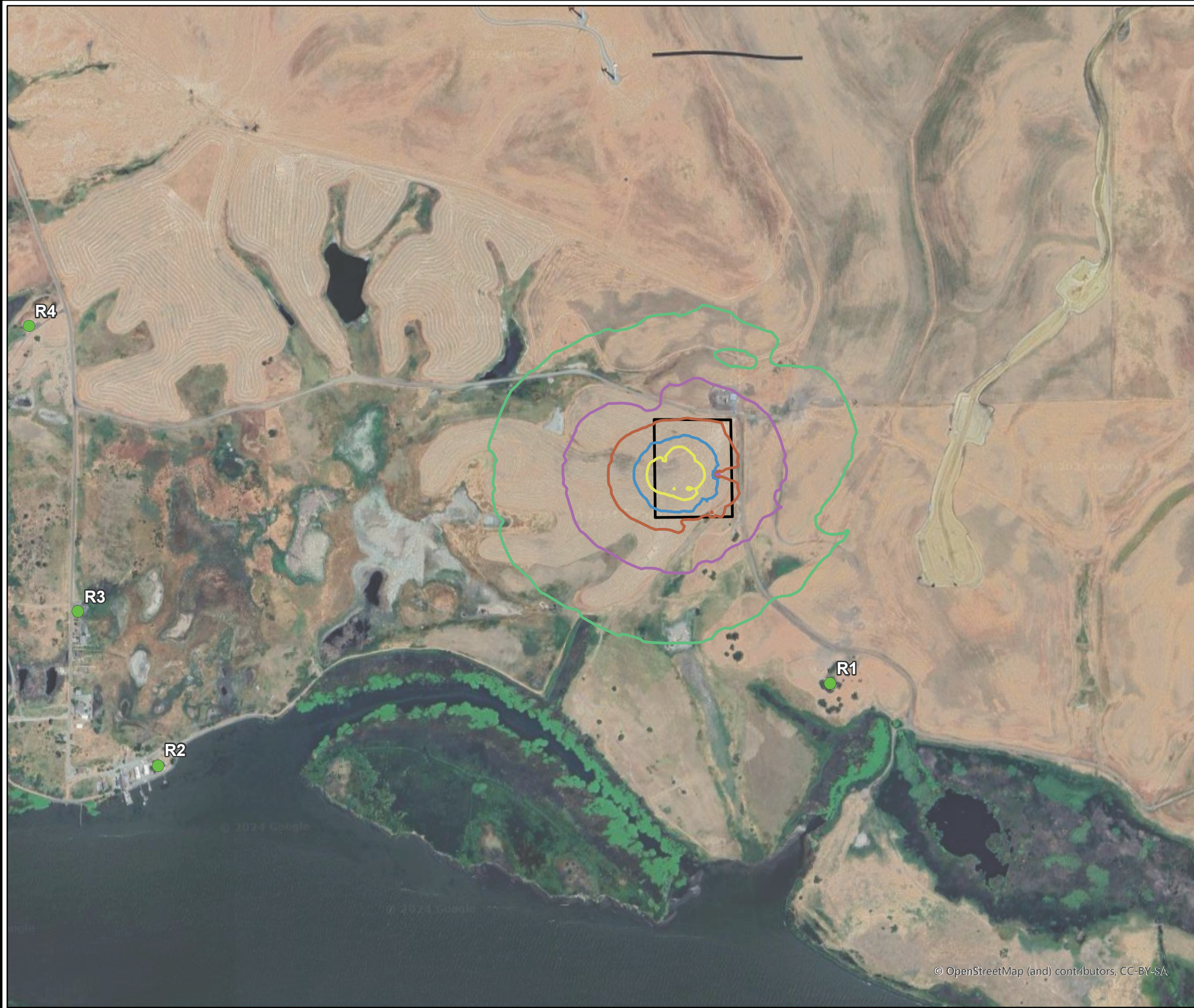
LS POWER GRID CALIFORNIA LLC
COLLINSVILLE 500/230 KV SUBSTATION PROJECT

DAYTIME NOISE CONTOURS



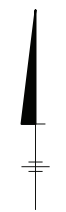
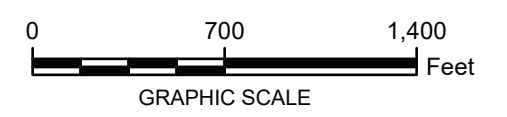
FIGURE 5

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LEGEND:

- RECEPTOR
- NIGHTTIME CONTOUR (dBA)
 - 45
 - 50
 - 55
 - 60
 - 65
- SITE BOUNDARY



NOTE:

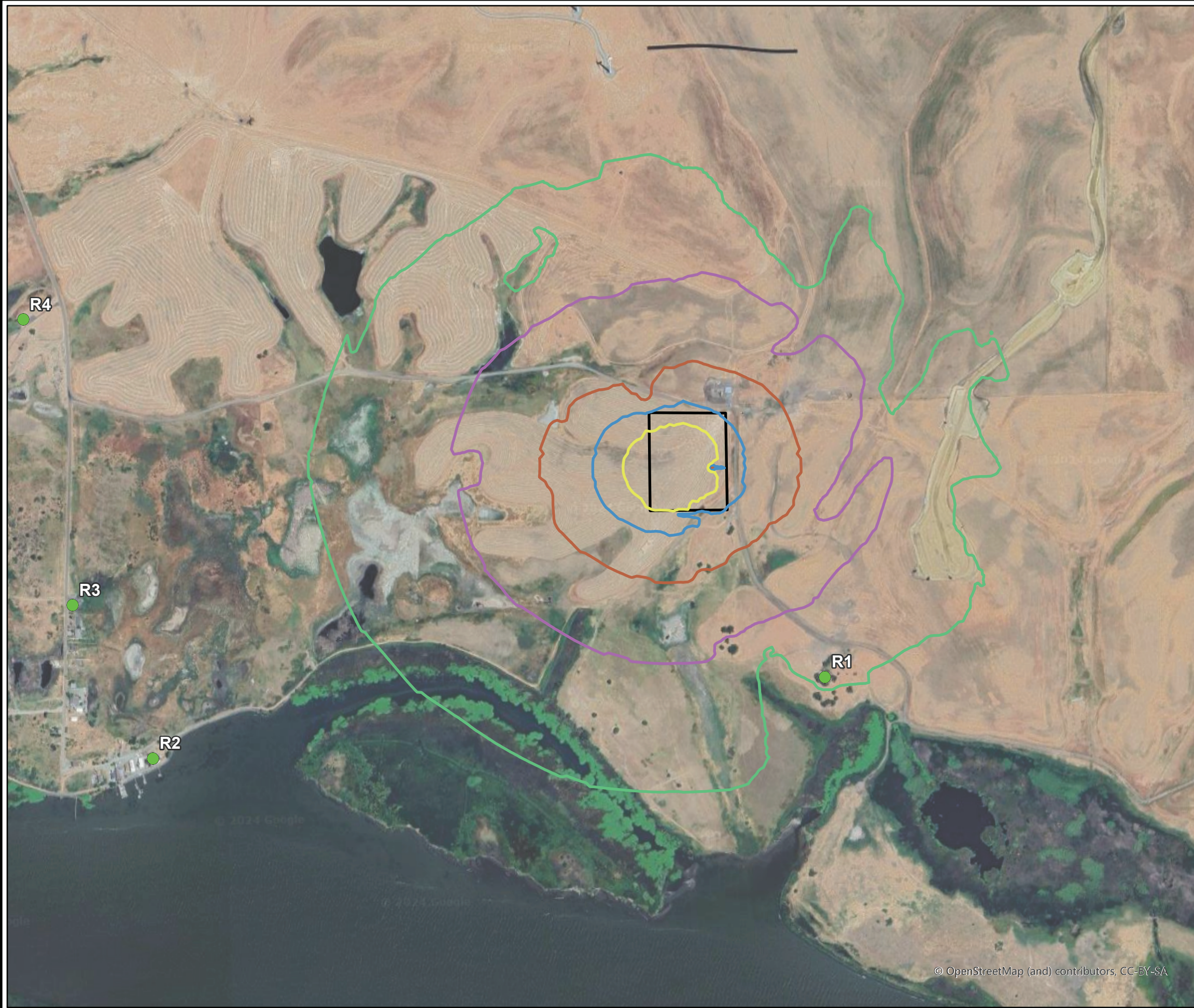
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LS POWER GRID CALIFORNIA LLC
COLLINSVILLE 500/230 KV SUBSTATION PROJECT

NIGHTTIME NOISE CONTOURS

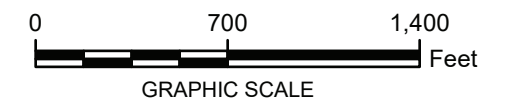
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LEGEND:

- RECEPTOR
- DAY/NIGHT CONTOUR (dBA)
 - 45
 - 50
 - 55
 - 60
 - 65
- SITE BOUNDARY



NOTE:

1. BASEMAPPING IMAGERY OBTAINED FROM GOOGLE EARTH PRO DATED 8/30/2023.

LS POWER GRID CALIFORNIA LLC
COLLINSVILLE 500/230 KV SUBSTATION PROJECT

DAY/NIGHT NOISE CONTOURS



FIGURE
7

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Figure 8

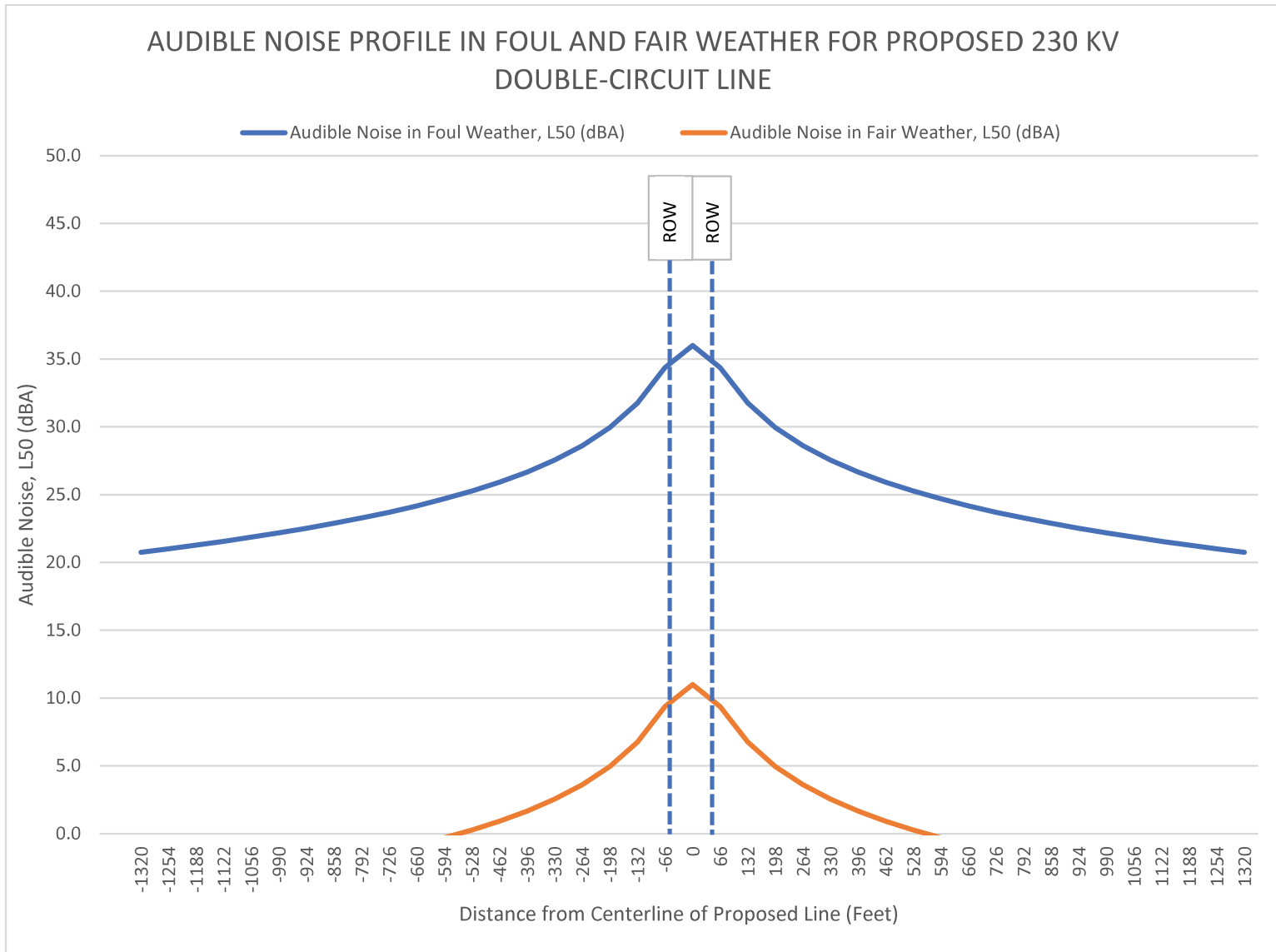
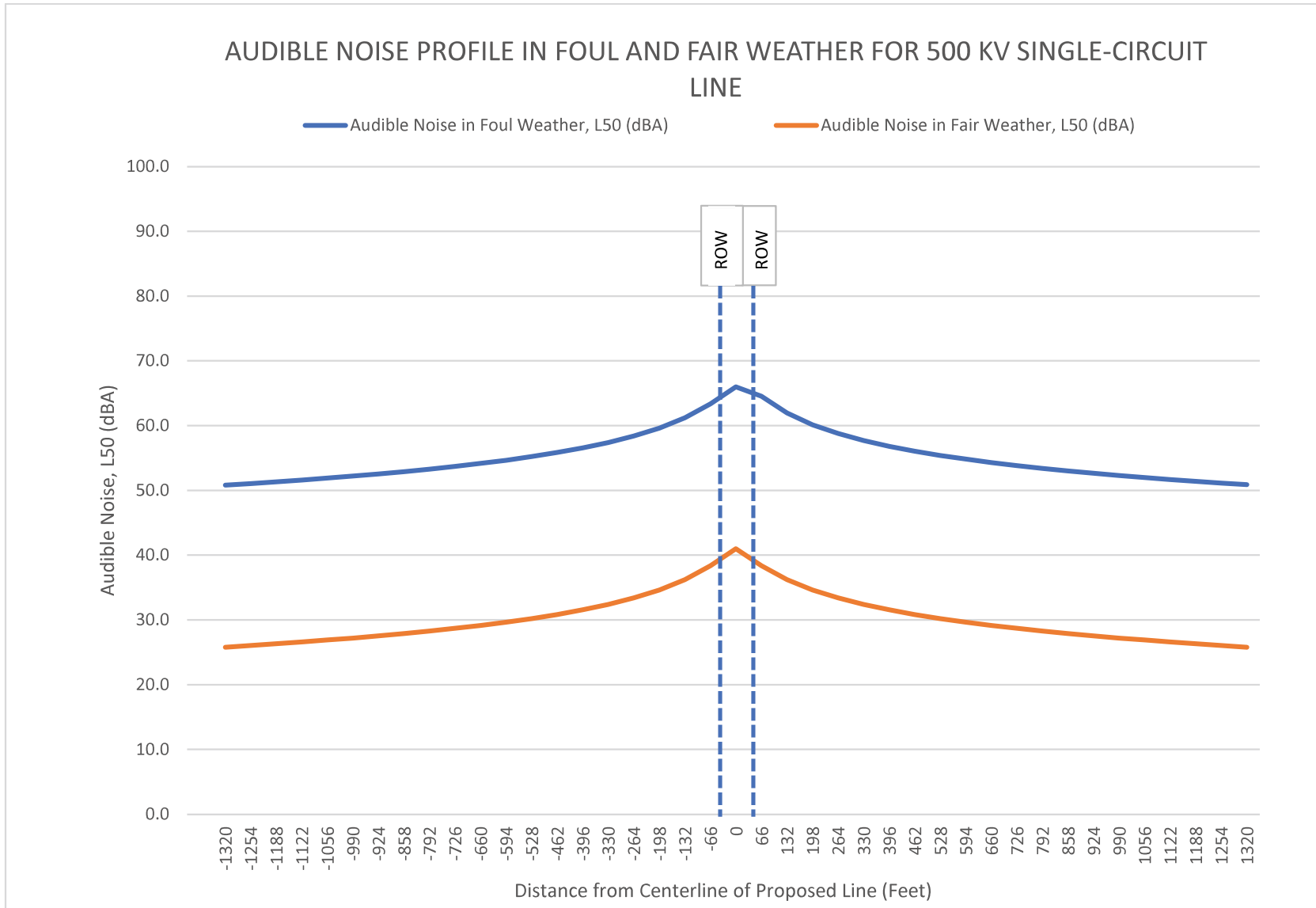


Figure 9



Appendix A

Instrument Certificate of Calibration

Certificate of Conformity and Calibration

Instrument Model:- CEL-633C
Serial Number 0499599
Firmware revision V006-05
Microphone Type:- CEL-251
Serial Number 2845
Preamplifier Type:- CEL-495
Serial Number 004704
Instrument Class/Type:- 1



Applicable standards:-

IEC 61672: 2013 / EN 60651 (Electroacoustics - Sound Level Meters)
 IEC 60651 1979 (Sound Level Meters), ANSI S1.4. 1983 (Specifications For Sound Level Meters)

Note:- The test sequences performed in this report are in accordance with the current Sound level meter Standard - IEC61672. The combination of tests performed are considered to confirm the products electro-acoustic performance to all applicable standards including superceded Sound Level Meter Standards - IEC60651 and IEC60804.

Test Conditions:-

21 °C
 33 %RH
 996 mBar

Test Engineer:-

Stephen Adams
 September 28, 2022

Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9001:2015 quality procedures. This product is certified as being compliant to the requirements of the CE Directive.

Test Summary:-

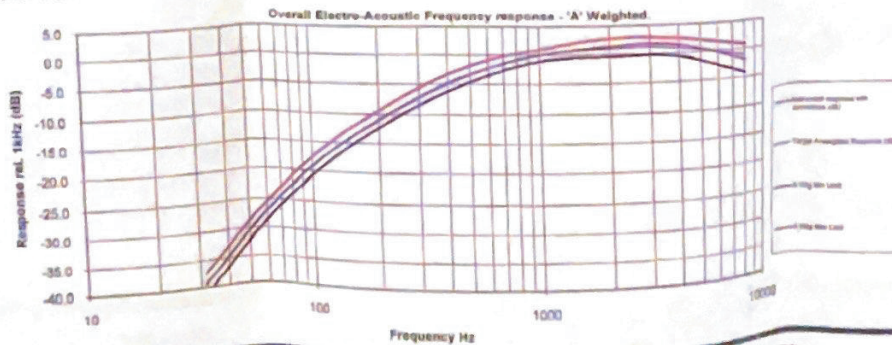
Self Generated Noise Test
 Electrical Signal Test Of Frequency Weightings
 Frequency & Time Weightings At 1 kHz
 Level Linearity On The Reference Level Range
 Toneburst Response Test
 C-peak Sound Levels
 Overload Indication
 Acoustic Tests

All Tests Pass
 All Tests Pass
 All Tests Pass
 All Tests Pass
 All Tests Pass
 All Tests Pass
 All Tests Pass
 All Tests Pass

Combined Electro-Acoustic Frequency Response - A Weighted

Combined Electro-Acoustic Frequency Response - A Weighted (IEC 61672-3:2006)

The following A-Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi-frequency pressure field calibrations. The microphones Pressure to Free field correction coefficients are applied to pressure response. Reference level taken at 1kHz.



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 Guangdong, China
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 Fax: +86 21 51202500
 Email: info@casellasolutions.com.cn

Certificate of Conformity and Calibration

Customer: Eco-Rental Solutions

Instrument: CEL-120/2

Serial Number: 4039312

Job Number: 26544

Date of Issue: 28-Sep-2022

Engineer: S. Adams

Traceable Equipment: Reference Calibrator EQ11086
DVM type Fluke 45 EQ00023

Test Conditions:

Ambient Temperature	21.0 °C
Ambient Humidity	33.0 %RH
Ambient Pressure	996 mBar

Results:	Level 1	Level 2	Frequency
Initial Reading	114.00 dB	N/A dB	1.0000 kHz
Final Reading	114.00 dB	N/A dB	1.0000 kHz

Uncertainty:

Level	± 0.15 dB
Frequency	± 0.5 Hz

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9000:2015 quality procedures. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.

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VIC 3170, Australia
Tel: +61 3 9562 0176
E: australia@casellasolutions.com

Certificate of Conformity and Calibration

Instrument Model:- CEL-633C

Serial Number 2511397
Firmware revision V129-09

Microphone Type:- CEL-251
Serial Number 1713

Preamplifier Type:- CEL-495
Serial Number 003768

Instrument Class/Type:- 1

Applicable standards:-

IEC 61672: 2013 / EN 60651 (Electroacoustics - Sound Level Meters)
IEC 60851 1979 (Sound Level Meters), ANSI S1.4: 1983 (Specifications For Sound Level Meters)

Note:- The test sequences performed in this report are in accordance with the current Sound level meter Standard - IEC61672. The combination of tests performed are considered to confirm the products electro-acoustic performance to all applicable standards including superceeded Sound Level Meter Standards - IEC60651 and IEC60804

Test Conditions:- 23 °C
44 %RH
996 mBar

Test Engineer:- Paul Blackwell
Date of Issue:- October 24, 2022



Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9001:2015 quality procedures. This product is certified as being compliant to the requirements of the CE Directive.

Test Summary:-

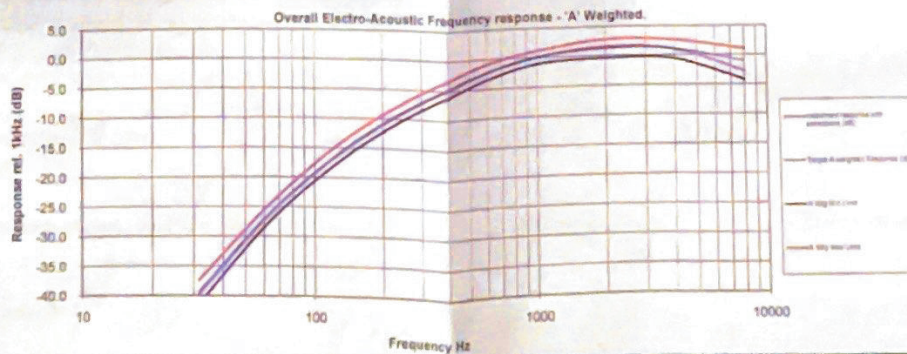
Self Generated Noise Test
Electrical Signal Test Of Frequency Weightings
Frequency & Time Weightings At 1 kHz
Level Linearity On The Reference Level Range
Toneburst Response Test
C-peak Sound Levels
Overload Indication
Acoustic Tests

All Tests Pass
All Tests Pass
All Tests Pass
All Tests Pass
All Tests Pass
All Tests Pass
All Tests Pass
All Tests Pass

Combined Electro-Acoustic Frequency Response - A Weighted

Combined Electro-Acoustic Frequency Response - A Weighted (IEC 61672-3:2006)

The following A-Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi-frequency pressure field calibrations. The microphones Pressure to Free field correction coefficients are applied to pressure response, Reference level taken at 1kHz



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Fax: +86-21-61002905
E-mail: info@casellaindustries.cn

Certificate of Conformity and Calibration

Customer: Eco-Rental Solutions

Instrument: CEL-110/1

Serial Number: 301160

Job Number: 26739

Date of Issue: 24-Oct-2022

Engineer: P Blackwell

Traceable Equipment: Reference Calibrator EQ11085
DVM type Fluke 45 EQ00318

Test Conditions:

Ambient Temperature	23.0 °C
Ambient Humidity	44.0 %RH
Ambient Pressure	996 mBar

Results:	Level 1	Level 2	Frequency
Initial Reading	113.95 dB	93.94 dB	1.0001 kHz
Final Reading	114.00 dB	94.05 dB	1.0001 kHz

Uncertainty:

Level	±	0.15	dB
Frequency	±	0.5	Hz

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9000:2015 quality procedures. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%. This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.

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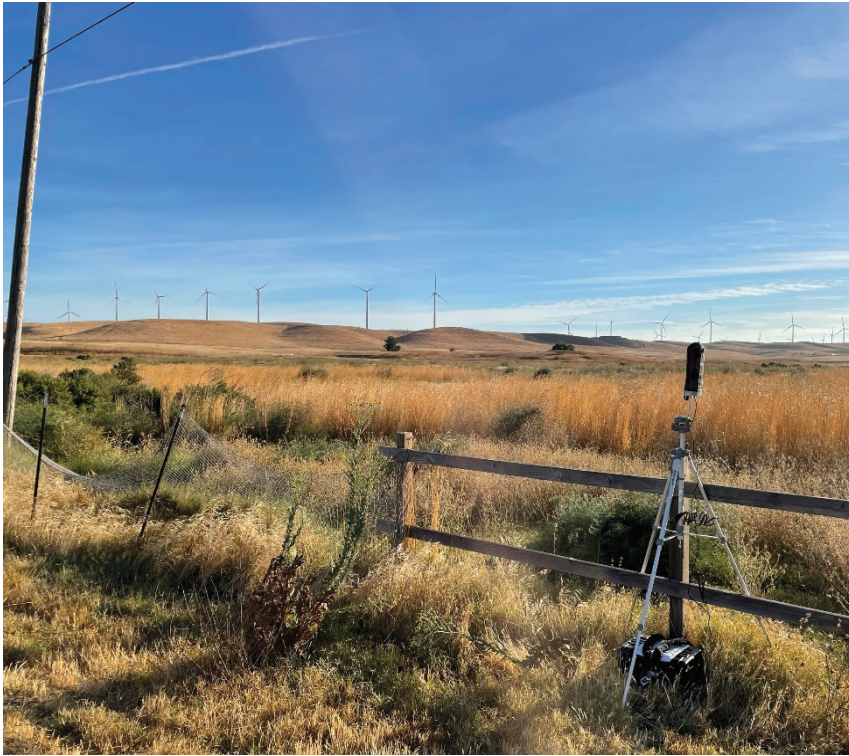
Appendix B

Photograph Log

Photograph Log



LS Power Grid California, LLC
Collinsville Substation
30193297



Photograph: 1

Description:
Collinsville 24HR
Monitoring Location

Location:
Collinsville, CA

**Photograph taken
by:** Mary-Catherine
Goddard

Date: 9/25/2023

Photograph Log

LS Power Grid California, LLC
Collinsville Substation
30193297



Photograph: 2

Description:
Collinsville Short
Term Monitoring
Location

Location:
Pittsburg, CA

**Photograph taken
by:** Mary-Catherine
Goddard

Date: 9/25/2023

APPENDIX I.2

Noise Modeling

1 Methods and Assumptions

1.1 Methodology

1. **Equipment L_{eq} at distance A.** For each equipment type, hourly L_{eq} at distance **A** (feet) was calculated from the standard **L_{max} at 50 ft** for each equipment type as listed in the Federal Highway Administration’s (FHWA’s) *Roadway Construction Noise Model, Version 1.0: User's Guide* (Federal Highway Administration (FHWA) 2006), adjusted for usage and distance, with aggregation for multiple identical units:

Formula:

$$L_{eq,A} = L_{max,50 ft} + 10\log_{10}\left(\frac{Usage \%}{100}\right) - 20\log_{10}\left(\frac{A}{50}\right) + 10\log_{10}(N)$$

Where:

- $L_{max,50 ft}$ = L_{max} at 50 feet from FHWA 2006
- Usage % = Default usage factors from FHWA 2006, except for equipment used for the **230 kV submarine cable**, for which use was taken as (hours/day) ÷ 12 hours.
- A = target distance (feet)
- N = estimated number of identical units (co-located and same distance)

2. **Aggregation and attenuation:** In Excel, macro functions were used for calculation of noise aggregation and attenuation of noise levels at distance X:

Function	Excel formula
dBSUM	=10*LOG10(10^(Cell1/10) + 10^(Cell2/10) + 10^(Cell3/10))
dBDistance	=Cell1 - 20*LOG10(Cell2/Cell3) in which Cell 1 is the reference noise level at the reference distance, Cell 2 is the target distance, and Cell 3 is the reference distance
DBSubtract	=10*LOG10(10^(Cell1/10) - 10^(Cell2/10))

3. **Noise levels for each component phase at receptors:** For each receptor, project noise level was calculated for each component phase for the distance from the component to the receptor. For linear components, project noise level was calculated for the closest point in the alignment to each receptor.
4. **Insertion losses at receptors:** For each component, an insertion loss was taken as follows:

- NR1 and NR2: Insertion loss of 10 dBA for earthen levee between receptor the 230kV submarine cable and the 230 kV northern transition approach (U.S. Army Corps of Engineers 2023; Solano LAFCA 2014; FHWA 2006; FHWA 2017)
 - NR3: Insertion loss of 10 dBA for 8-foot sound wall between receptor and the Pittsburg Substation, Pittsburg Substation staging yards east and west, 230 kV underground segment, and 230 kV submarine segment alignment (FHWA 2017)
5. **Overlap periods.** Overlap periods represent distinct phase combinations as they occur chronologically. An overlap period starts whenever any phase starts or ends and then ends immediately before the next such change. For each receptor, overlap scenarios are identified and project noise levels after insertion loss, as calculated in step 4, are combined via logarithmic summation for each scenario.
 6. **Project noise combined with existing ambient noise levels:** Project noise levels for each overlap period (step 5) are combined with existing measured noise levels (see below) for each receptor (see Assumptions, below).

1.2 Mitigation Scenarios

Noise level ranges are calculated at each receptor for the following mitigation scenarios:

- **Primary:** No mitigation. Assumes use of helicopters within Solano County during the entire work period of 7 a.m. to 7 p.m., Monday through Saturday.
- **MM NOI-1:** Helicopter usage restricted in Solano County to the hours of 9 a.m. to 4 p.m. Monday through Saturday, during which time noise levels resulting from temporary construction activity are allowed up to 75 dBA Leq. This represents overlapping noise levels that would occur at receptors in Solano County outside of the hours of 9 a.m. to 4 p.m. Monday through Saturday.
- **MM NOI-2:** Installation of sound walls at the Collinsville Substation site engineered for a reduction of at least 10 dBA at the source. This represents the overlapping noise levels that would occur at receptors in Solano County during the hours of 9 a.m. to 4 p.m., Monday through Saturday, after with the implementation of sound wall mitigation when helicopters are in use in Solano County.
- **MM NOI-1 and MM NOI-2** Helicopter usage restricted in Solano County to the hours of 9 a.m. to 4 p.m. Monday through Saturday and installation of sound walls at the Collinsville Substation site engineered for a reduction of at least 10 dBA at the source. This represents the overlapping noise levels that would occur at receptors outside of the hours of 9 a.m. to 4 p.m., Monday through Saturday, with implementation of sound wall mitigation.
- **MM NOI-1, MM NOI-2, and MM NOI-4:** Helicopter usage restricted in Solano County to the hours of 9 a.m. to 4 p.m. Monday through Saturday, installation of sound walls at the Collinsville Substation site engineered for a reduction of at least 10 dBA at the source, and construction activities at Transposition Site C and Alternative 2 substation site restricted to the hours of 9 a.m. to 4 p.m. Monday through Saturday. This represents the overlapping noise levels that would occur at NR6 outside of the hours of 9 a.m. to 4 p.m., Monday through Saturday, with implementation of sound wall mitigation.

1.3 Existing Ambient Noise Levels at Receptors

- **NR1 Residences along Latin Road in Solano County:** Noise measurements taken by Arcadis at NM2 (Arcadis U.S., Inc. 2024)
- **NR2 Residences along Collinsville Road in Solano County:** Noise measurements taken by Arcadis at NM2 (Arcadis U.S., Inc. 2024)
- **NR3 Residences along Halsey Couty and Halsey Way in Pittsburg:** Noise measurements taken at Halsey Court by Arcadis at NM1 (Arcadis U.S., Inc. 2024)
- **NR2a1 Residences at Collinsville Road and Talbert Lane:** Caltrans assumed baseline noise level for agricultural and rural-residential land (Caltrans 1998; CPUC 2013)
- **NR6 Single-family residence at Birds Landing Road (Proposed Project NR6):** Caltrans assumed baseline noise level for agricultural and rural-residential land (Caltrans 1998; CPUC 2013)

1.4 Analog Equipment for Noise Modeling

In cases where construction equipment types are not explicitly listed in the *Roadway Construction Noise Model, Version 1.0: User's Guide* (Federal Highway Administration (FHWA) 2006), acoustically similar equipment is used as an analog. This ensures that modeled noise levels reasonably represent the expected sound characteristics of the unlisted equipment. Analogue equipment noise levels were used for the following project equipment types:

- **Anchor winch:** Mapped to portable generator. While not mechanically identical, both are stationary, motor-driven devices producing steady-state mechanical noise in the mid-80 dB range at 50 feet.
- **Barge tug:** Mapped to tugboat (workboat). Tugs are large marine engines producing continuous propulsion and maneuvering noise, generally around 87 dB at 50 feet.
- **Small boats:** Mapped to outboard motorboat. These have smaller engines and broadband noise emissions, generally around 85 dB at 50 feet.
- **Anchor tug:** Mapped to tugboat (workboat). Functionally and acoustically similar to barge tugs, producing 87 dB at 50 feet.

1.5 References

Arcadis U.S., Inc. 2024. Noise and Vibration Impact Assessment Report.

California Department Of Transportation (Caltrans). 1998. Technical Noise Supplement.

California Public Utilities Commission (CPUC. 2013. PG&E Cressey-Gallo 115 kV Power Line Project Final Initial Study and Mitigated Negative Declaration. Avaialble: [https://ia.cpuc.ca.gov/Environment/info/aspen/cresseygallo/archive/cresseygallo\(10-8-14\).htm](https://ia.cpuc.ca.gov/Environment/info/aspen/cresseygallo/archive/cresseygallo(10-8-14).htm).

Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction Noise Model, Version 1.0: User's Guide. Final Report, DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared

for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington, DC 20590. <https://rosap.nhl.bts.gov/view/dot/8895>.

———. 2017. “3. Acoustical Considerations.” In Noise Barrier Design Handbook. https://www.fhwa.dot.gov/Environment/noise/noise_barriers/design_construction/design/design03.cfm.

Solano Local Agency Formation Commission (Solano LAFCO). 2014. Collinsville Levee District. August. Available: <https://www.solanolafco.com/district-maps/>.

U.S. Army Corps of Engineers. 2023. “National LeveeDatabase.” July 15. <https://www.arcgis.com/home/item.html?id=9d589eb8cf1640918585b40af795d7e4>.

NOISE SUPPLEMENTAL INFORMATION

APPENDIX I

Noise Supplemental Information

Appendix I.1	Noise and Vibration Impact Assessment Report
Appendix I.2	Noise Modeling

Proposed Project Existing Ambient sound Levels			
Location	Day	Night	Day/night
NR3: City of Pittsburg (NM1)	46	40.0	50
NR1, NR2: Solano County (NM2)	48	42.0	48
NR4, NR5, NR6: Solano County	30	30	30
NR7: Contra Costa	30	30	30
Alternatives Existing Ambient sound Levels			
Location	Day	Night	Day/night
NR2a1	48	42.0	48
NR6	48	42.0	48
Sources: California Department Of Transportation (Caltrans). 1998. Technical sound Supplement. 1998; Arcadis U.S., Inc. 2024. sound and Vibration Impact Assessment Report.			

Proposed Project sound-sensitive Receptors Solano County						
Receptor	Distance from Collinsville substation site (feet)	Distance from Collinsville Substation north staging yard	Distance from 230 kV overhead segment (feet)	Distance from 230 kV submarine segment (feet)	Distance from northern transition approach	Distance from PG&E 500 kV interconnection loop (feet)
NR1: Single-family residences along Latin Lane	3,545	3,090	4,500	2,750	4,400	4,025
NR2: Single-family residences along Collinsville Road	3,787	3,200	4,107	3,965	5,500	4,070
NR4: Single-family residence at Box R Ranch Road						
NR5: Single-family residence at Mauds Lane						
NR6: Single-family residence at Birds Landing Road						

Proposed Project sound-sensitive Receptors Solano County				
Receptor	Distance from PG&E 12 kV distribution line	Distance from PG&E Transposition Site A	Distance from PG&E Transposition Site B	Distance from PG&E Transposition Site C
NR1: Single-family residences along Latin Lane	2,351			
NR2: Single-family residences along Collinsville Road	1,331			
NR4: Single-family residence at Box R Ranch Road		1,000		
NR5: Single-family residence at Mauds Lane			900	
NR6: Single-family residence at Birds Landing Road				1,100
Sources: Esri. 2025. "Hybrid Reference Layer (US Edition)." Vector digital data. Using Arc GIS Online (September 18, 2025), February 11, 2025. Basemap. Last updated September 12, 2025. https://www.arcgis.com/home/item.html?id=5447e9aef0684ec391ae9381725f7370 .				

Alternatives sound-sensitive Receptors Solano County						
Receptor	Distance from Collinsville substation site (feet)	Distance from Collinsville Substation north staging yard	Distance from 230 kV overhead segment (feet)	Distance from 230 kV submarine segment (feet)	Distance from northern transition approach	Distance from PG&E 500 kV interconnection loop (feet)
NR2a1: Single-family Residence at Talbert Lane	9,200	7,500	4,690	2,850	2,750	9,450
N2a2: Single-family residence at Birds Landing Road	20,850	19,890	21,030	24,290	23,500	15,690

Alternatives sound-sensitive Receptors Solano County				
Receptor	Distance from PG&E 12 kV distribution line	Distance from PG&E Transposition Site A	Distance from PG&E Transposition Site B	Distance from PG&E Transposition Site C
NR2a1: Single-family Residence at Talbert Lane	8,850			
N2a2: Single-family residence at Birds Landing Road	22,270			1,100
Sources: Esri. 2025. "Hybrid Reference Layer (US Edition)." Vector digital data. Using Arc GIS Online (September 18,2025), February 11, 2025. Basemap. Last updated September 12, 2025. https://www.arcgis.com/home/item.html?id=5447e9aef0684ec391ae9381725f7370 .				

sound-sensitive Receptors City of Pittsburg							
Receptor	230 kV underground segment	Distance from Pittsburg Substation	Pittsburg Substation staging yard east	Distance from Pittsburg Substation staging yard west	Distance from telecom line interconnection	Distance from 230 kV submarine (closest point)	Distance from southern transition approach
NR3: Residences along Halsey Court and Halsey Way	1,900	250	290	1,520	45	2,400	2,400
Sources: Esri. 2025. "Hybrid Reference Layer (US Edition)." Vector digital data. Using Arc GIS Online (September 18, 2025), February 11, 2025. Basemap. Last updated September 12, 2025. https://www.arcgis.com/home/item.html?id=5447e9aef0684ec391ae9381725f7370 .							

Proposed Project sound-sensitive Receptors Contra Costa County	
Receptor	Distance from PG&E Transposition Site D
NR7: Single-family residence along Meridian Road	345
Sources: Esri. 2025. "Hybrid Reference Layer (US Edition)." Vector digital data. Using Arc GIS Online (September 18,2025), February 11, 2025. Basemap. Last updated September 12, 2025. https://www.arcgis.com/home/item.html?id=5447e9ae-f0684ec391ae9381725f7370 .	

LSPGC Collinsville Substation – Above-Grade Construction						
Equipment	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)
Truck - Water 4000 Gallons	300	4	72	40%	68	54
Loader - 4-5 Yards	230	2	79	40%	72	58
Truck - Dump 10-12 Yards	415	5	76	40%	71	57
Motor Grader	250	2	85	40%	78	64
Scraper	410	4	84	40%	80	66
Vibratory Roller	157	2	80	20%	70	56
Pickup - 1/2 Ton	395	4	75	40%	71	57
Generator – 25 kW	36	2	81	50%	75	61
Forklift - 15000 Pounds	130	4	88	20%	81	67
Pickup - 1 Ton	410	4	75	40%	71	57
844 Loader	417	1	79	40%	69	55
Semi Truck	500	2	74	40%	67	53
Combined					86	72

LSPGC Collinsville Substation – Above-Grade Construction							
Equipment	Proposed Project				Proposed Project		
	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 1500 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	Calculated sound level at NR1, 3545 feet (Leq dBA)	Calculated sound level at NR2 3787 feet (Leq dBA)	
Truck - Water 4000 Gallons	48	45	40	34	37	37	
Loader - 4-5 Yards	52	49	44	38	41	41	
Truck - Dump 10-12 Yards	51	48	43	37	40	40	
Motor Grader	58	55	50	44	47	47	
Scraper	60	57	52	46	49	49	
Vibratory Roller	50	47	42	36	39	39	
Pickup - 1/2 Ton	51	48	43	37	40	40	
Generator – 25 kW	55	52	47	41	44	44	
Forklift - 15000 Pounds	61	58	53	47	50	50	
Pickup - 1 Ton	51	48	43	37	40	40	
844 Loader	49	46	41	35	38	38	
Semi Truck	47	44	39	33	36	36	
Combined	66	63	58	52	55	55	

LSPGC Collinsville Substation – Above-Grade Construction				
Equipment	Alternative 1 Calculated sound level at NR1, 9200 feet (Leq dBA)	Alternative 1 Calculated sound level at NR2a1 5400 feet (Leq dBA)	Alternative 2 Calculated sound level at NR1, 19170 feet (Leq dBA)2	Alternative 2 Calculated sound level at NR6 3780 feet (Leq dBA)2
Truck - Water 4000 Gallons	29	33	37	22
Loader - 4-5 Yards	33	37	41	26
Truck - Dump 10-12 Yards	32	36	40	25
Motor Grader	39	43	47	32
Scraper	41	45	49	34
Vibratory Roller	31	35	39	24
Pickup - 1/2 Ton	32	36	40	25
Generator – 25 kW	36	40	44	29
Forklift - 15000 Pounds	42	46	50	35
Pickup - 1 Ton	32	36	40	25
844 Loader	30	34	38	23
Semi Truck	28	32	36	21
Combined	46.9	51.5	54.6	40.5
<p>Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.ntl.bts.gov/view/dot/8895.</p>				

LSPGC Collinsville Substation – Below-Grade Construction						
Equipment	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)
Truck - Water 4000 Gallons	300	2	72	40%	68	54
Excavator	108	2	81	40%	74	60
Forklift - 15000 Reach	130	3	88	20%	80	66
Backhoe - 2X4	68	2	78	40%	71	57
Pickup - 1/2 Ton	395	4	75	40%	71	57
Pickup - 1 Ton	410	4	75	40%	71	57
Excavator - Mini	70	1	81	40%	71	57
Generator – 25 kW	36	1	81	50%	72	58
Truck - Concrete	425	4	79	40%	75	61
Loader - 4-5 Yards	230	2	79	40%	72	58
Pressure Digger - Lo-Drill (Tracked)	275	1	84	20%	71	57
Excavator	275	1	81	40%	71	57
Truck - Dump 10-12 Yards	415	3	76	40%	71	57
Tool - Van/Conex 20 Feet	0	6	85	50%	84	70
Trencher	75	2	80	50%	74	60
Skid steer loader	74	2	79	40%	72	58
Combined					88	74

LSPGC Collinsville Substation – Below-Grade Construction						
Equipment	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 1500 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	Calculated sound level at NR1 3545 feet	Calculated sound level at NR2 3787 feet
Truck - Water 4000 Gallons	48	45	40	34	37	37
Excavator	54	51	46	40	43	43
Forklift - 15000 Reach	60	57	52	46	49	49
Backhoe - 2X4	51	48	43	37	40	40
Pickup - 1/2 Ton	51	48	43	37	40	40
Pickup - 1 Ton	51	48	43	37	40	40
Excavator - Mini	51	48	43	37	40	40
Generator – 25 kW	52	49	44	38	41	41
Truck - Concrete	55	52	47	41	44	44
Loader - 4-5 Yards	52	49	44	38	41	41
Pressure Digger - Lo-Drill (Tracked)	51	48	43	37	40	40
Excavator	51	48	43	37	40	40
Truck - Dump 10-12 Yards	51	48	43	37	40	40
Tool - Van/Conex 20 Feet	64	61	56	50	53	53
Trencher	54	51	46	40	43	43
Skid steer loader	52	49	44	38	41	41
Combined	68	64	60	54	57	56

LSPGC Collinsville Substation – Below-Grade Construction				
Equipment	Alternative 1 Calculated sound level at NR1, 9200 feet (Leq dBA)	Alternative 1 Calculated sound level at NR2a1 5400 feet (Leq dBA)	Alternative 2 Calculated sound level at NR1, 19170 feet (Leq dBA)2	Alternative 2 Calculated sound level at NR6 3780 feet (Leq dBA)2
Truck - Water 4000 Gallons	29	33	37	22
Excavator	35	39	43	28
Forklift - 15000 Reach	41	45	49	34
Backhoe - 2X4	32	36	40	25
Pickup - 1/2 Ton	32	36	40	25
Pickup - 1 Ton	32	36	40	25
Excavator - Mini	32	36	40	25
Generator – 25 kW	33	37	41	26
Truck - Concrete	36	40	44	29
Loader - 4-5 Yards	33	37	41	26
Pressure Digger - Lo-Drill (Tracked)	32	36	40	25
Excavator	32	36	40	25
Truck - Dump 10-12 Yards	32	36	40	25
Tool - Van/Conex 20 Feet	45	49	53	38
Trencher	35	39	43	28
Skid steer loader	33	37	41	26
Combined	48.4	53	56.1	42
Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhl.bts.gov/view/dot/8895 .				

LSPGC Collinsville Substation – Above-Grade Construction							
Equipment	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	
Wire Trailer/Tensioner		175	1	85	50%	76	62
Wire Puller		175	1	85	50%	76	62
Crane - 200 Ton		275	1	81	16%	67	53
Pickup - 1/2 Ton		395	4	75	40%	71	57
Pickup - 1 Ton		410	4	75	40%	71	57
Welding Truck		395	2	74	40%	67	53
Generator – 25 kW		36	2	81	50%	75	61
Crane - 35 Ton (Manlift)		250	2	81	16%	67	53
Forklift - 10000 Reach		130	2	88	20%	78	64
Forklift -15000 Pounds		130	1	88	20%	75	61
Loader - 4-5 Yards		74	2	79	40%	72	58
120-Foot Manlift		74	2	75	20%	65	51
Combined						84	70

LSPGC Collinsville Substation – Above-Grade Construction						
Equipment	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 1500 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	Calculated sound level at NR1 3545 feet	Calculated sound level at NR2 3787 feet
Wire Trailer/Tensioner	56	53	48	42	45	45
Wire Puller	56	53	48	42	45	45
Crane - 200 Ton	47	44	39	33	36	36
Pickup - 1/2 Ton	51	48	43	37	40	40
Pickup - 1 Ton	51	48	43	37	40	40
Welding Truck	47	44	39	33	36	36
Generator – 25 kW	55	52	47	41	44	44
Crane - 35 Ton (Manlift)	47	44	39	33	36	36
Forklift - 10000 Reach	58	55	50	44	47	47
Forklift -15000 Pounds	55	52	47	41	44	44
Loader - 4-5 Yards	52	49	44	38	41	41
120-Foot Manlift	45	42	37	31	34	34
Combined	64	61	56	50	53	53

LSPGC Collinsville Substation – Above-Grade Construction				
Equipment	Alternative 1 Calculated sound level at NR1, 9200 feet (Leq dBA)	Alternative 1 Calculated sound level at NR2a1 5400 feet (Leq dBA)	Alternative 2 Calculated sound level at NR1, 19170 feet (Leq dBA)2	Alternative 2 Calculated sound level at NR6 3780 feet (Leq dBA)2
Wire Trailer/Tensioner	37	41	45	30
Wire Puller	37	41	45	30
Crane - 200 Ton	28	32	36	21
Pickup - 1/2 Ton	32	36	40	25
Pickup - 1 Ton	32	36	40	25
Welding Truck	28	32	36	21
Generator – 25 kW	36	40	44	29
Crane - 35 Ton (Manlift)	28	32	36	21
Forklift - 10000 Reach	39	43	47	32
Forklift -15000 Pounds	36	40	44	29
Loader - 4-5 Yards	33	37	41	26
120-Foot Manlift	26	30	34	19
Combined	45	50	53	39
Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590.				

Collinsville Substation – Site and ROW Restoration							
Equipment	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	
Pickup - 1 Ton	410	4	75	40%	71	57	
Motor Grader	250	2	85	40%	78	64	
Backhoe - 2X4	68	2	78	40%	71	57	
Truck - Water 4000 Gallons	300	2	72	40%	65	51	
Skid steer loader	74	1	79	40%	69	55	
Excavator	250	1	81	40%	71	57	
D6 Type Dozer	250	1	82	40%	72	58	
Pickup - 1/2 Ton	395	4	75	40%	71	57	
Truck - Dump 10-12 Yards	415	2	76	40%	69	55	
Combined					82	68	

Collinsville Substation – Site and ROW Restoration						
Equipment	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 1500 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	Calculated sound level at NR1 3545 feet	Calculated sound level at NR2 3787 feet
Pickup - 1 Ton	51	48	43	37	40	40
Motor Grader	58	55	50	44	47	47
Backhoe - 2X4	51	48	43	37	40	40
Truck - Water 4000 Gallons	45	42	37	31	34	34
Skid steer loader	49	46	41	35	38	38
Excavator	51	48	43	37	40	40
D6 Type Dozer	52	49	44	38	41	41
Pickup - 1/2 Ton	51	48	43	37	40	40
Truck - Dump 10-12 Yards	49	46	41	35	38	38
Combined	62	58	54	48	51	50

Collinsville Substation – Site and ROW Restoration				
Equipment	Alternative 1 Calculated sound level at NR1, 7500 feet (Leq dBA)	Alternative 1 Calculated sound level at NR2a1 4700 feet (Leq dBA)	Alternative 2 Calculated sound level at NR1, 18870 feet (Leq dBA)2	Alternative 2 Calculated sound level at NR6 3060 feet (Leq dBA)2
Pickup - 1 Ton	32	37	41	26
Motor Grader	39	44	48	33
Backhoe - 2X4	32	37	41	26
Truck - Water 4000 Gallons	26	31	35	20
Skid steer loader	30	35	39	24
Excavator	32	37	41	26
D6 Type Dozer	33	38	42	27
Pickup - 1/2 Ton	32	37	41	26
Truck - Dump 10-12 Yards	30	35	39	24
Combined	43	47	52	36
<p>Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhtl.bts.gov/view/dot/8895.</p>				

Collinsville Substation – Staging Yard Establishment and Use							
Equipment	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	
Water Truck (4000 Gal 300 HP)	300	1	72	40%	62	48	
Loader (4-5 Yd 74 HP)	230	1	79	40%	69	55	
Dump Truck (10-12 Yd 415 HP)	415	1	76	40%	66	52	
Motor Grader (250 HP)	250	1	85	40%	75	61	
Scraper (410 HP)	410	1	84	40%	74	60	
Vibratory Roller (157 HP)	157	1	80	20%	67	53	
Pickup Truck (1/2-Ton 395 HP)	395	2	75	40%	68	54	
Generator (36 HP)	36	2	81	50%	75	61	
Forklift (15000 Lb Reach 130 HP)	130	2	88	20%	78	64	
Pickup Truck (1-Ton 410 HP)	410	2	75	40%	68	54	
844 Loader (417 HP)	417	1	79	40%	69	55	
Semi-Truck (500 HP)1	500	2	74	40%	67	53	
Helicopter – Heavy Duty (3200 HP)2	3,200	1	106	50%	97	83	
Combined					98	84	

Collinsville Substation – Staging Yard Establishment and Use						
Equipment	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 1500 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	Calculated sound level at NR1 3090 feet (Leq dBA)	Calculated sound level at NR2 3200 feet (Leq dBA)
Water Truck (4000 Gal 300 HP)	42	39	34	28	33	32
Loader (4-5 Yd 74 HP)	49	46	41	35	40	39
Dump Truck (10-12 Yd 415 HP)	46	43	38	32	37	36
Motor Grader (250 HP)	55	52	47	41	46	45
Scraper (410 HP)	54	51	46	40	45	44
Vibratory Roller (157 HP)	47	44	39	33	38	37
Pickup Truck (1/2-Ton 395 HP)	48	45	40	34	39	38
Generator (36 HP)	55	52	47	41	46	45
Forklift (15000 Lb Reach 130 HP)	58	55	50	44	49	48
Pickup Truck (1-Ton 410 HP)	48	45	40	34	39	38
844 Loader (417 HP)	49	46	41	35	40	39
Semi-Truck (500 HP)1	47	44	39	33	38	37
Helicopter – Heavy Duty (3200 HP)2	77	74	69	63	68	67
Combined	78	74	70	64	68	68

Collinsville Substation – Staging Yard Establishment and Use				
Equipment	Alternative 1 Calculated sound level at NR1, 7500 feet (Leq dBA)	Alternative 1 Calculated sound level at NR2a1 4700 feet (Leq dBA)	Alternative 2 Calculated sound level at NR1, 19170 feet (Leq dBA)2	Alternative 2 Calculated sound level at NR6 3060 feet (Leq dBA)2
Water Truck (4000 Gal 300 HP)	25	29	33	17
Loader (4-5 Yd 74 HP)	32	36	40	24
Dump Truck (10-12 Yd 415 HP)	29	33	37	21
Motor Grader (250 HP)	38	42	46	30
Scraper (410 HP)	37	41	45	29
Vibratory Roller (157 HP)	30	34	38	22
Pickup Truck (1/2-Ton 395 HP)	31	35	39	23
Generator (36 HP)	38	42	46	30
Forklift (15000 Lb Reach 130 HP)	41	45	49	33
Pickup Truck (1-Ton 410 HP)	31	35	39	23
844 Loader (417 HP)	32	36	40	24
Semi-Truck (500 HP)1	30	34	38	22
Helicopter – Heavy Duty (3200 HP)2	60	64	68	52
Combined	60	64	68	52
Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhl.bts.gov/view/dot/8895 .				

PG&E IT Work at Collinsville Substation							
Equipment	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	
Pickup - 1/2 Ton	395	4	75	40%	66	51	
Pickup - 1 Ton	410	2	75	40%	65	51	
Crane - 35 Ton (Manlift)	250	1	81	16%	67	53	
Forklift -15000 lb	130	2	88	20%	75	61	
120' Manlift	74	1	75	20%	62	48	
Truck - Water 4 K	300	1	72	40%	62	48	
Excavator	108	1	81	40%	71	57	
Excavator - Mini	70	2	81	40%	71	57	
Generator – 25 Kw	36	1	81	50%	72	58	
Truck - Concrete	425	4	79	40%	69	55	
Loader - 4-5 Yd	230	1	79	40%	69	55	
Pressure Digger - Lo-Drill (Tracked)	275	1	84	20%	71	57	
Excavator	275	1	81	40%	71	57	
Truck - Dump 10-12 Yd	415	2	76	40%	66	52	
Skid steer loader	74	2	79	40%	69	55	
Combined					81	67	

PG&E IT Work at Collinsville Substation							
Equipment	Proposed Project				Proposed Project		
	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2000 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	Calculated sound level at NR1, 3545 feet (Leq dBA)	Calculated sound level at NR2, 3787 feet (Leq dBA)	
Pickup - 1/2 Ton	45	39	37	31	34	33	
Pickup - 1 Ton	45	39	37	31	34	33	
Crane - 35 Ton (Manlift)	47	41	39	33	36	36	
Forklift -15000 lb	55	49	47	41	44	43	
120' Manlift	42	36	34	28	31	30	
Truck - Water 4 K	42	36	34	28	31	30	
Excavator	51	45	43	37	40	39	
Excavator - Mini	51	45	43	37	40	39	
Generator – 25 Kw	52	46	44	38	41	40	
Truck - Concrete	49	43	41	35	38	37	
Loader - 4-5 Yd	49	43	41	35	38	37	
Pressure Digger - Lo-Drill (Tracked)	51	45	43	37	40	39	
Excavator	51	45	43	37	40	39	
Truck - Dump 10-12 Yd	46	40	38	32	35	34	
Skid steer loader	49	43	41	35	38	37	
Combined	61	55	53	47	50	50	

PG&E IT Work at Collinsville Substation				
Equipment	Alternative 1 Calculated sound level at NR1, 9200 feet (Leq dBA)	Alternative 1 Calculated sound level at NR2a1, 5400 feet (Leq dBA)	Alternative 2 Calculated sound level at NR1, 19171 feet (Leq dBA)2	Alternative 2 Calculated sound level at NR6, 3780 feet (Leq dBA)
Pickup - 1/2 Ton	26	30	19	34
Pickup - 1 Ton	26	30	19	34
Crane - 35 Ton (Manlift)	28	32	21	35
Forklift -15000 lb	36	40	29	43
120' Manlift	23	27	16	30
Truck - Water 4 K	23	27	16	31
Excavator	31	36	25	39
Excavator - Mini	31	36	25	39
Generator – 25 Kw	33	37	26	40
Truck - Concrete	30	34	23	37
Loader - 4-5 Yd	30	34	23	38
Pressure Digger - Lo-Drill (Tracked)	32	36	26	40
Excavator	32	36	25	39
Truck - Dump 10-12 Yd	27	31	21	35
Skid steer loader	30	34	23	38
Combined	42	47	36	50
<p>Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User’s Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhl.bts.gov/view/dot/8895.</p>				

PG&E 12 kV Distribution Line							
Equipment Name	Anticipated Engine Output (horsepower)	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	
Pickup - 1/2 ton	395	2	75	40%	68	54	
Wire Trailer/Tensioner	175	1	85	50%	76	62	
Wire Puller	175	1	85	50%	76	62	
Crane - 35 Ton (Manlift)	250	2	81	16%	70	56	
Pickup - 1 Ton	410	2	75	40%	68	54	
Forklift - 15000 Reach	130	2	88	20%	78	64	
Pressure Digger - Lo-Drill (Tracked)	275	1	84	20%	71	57	
Truck - Dump 10-12 Yards	415	2	76	40%	69	55	
Skid steer loader	74	2	79	40%	72	58	
Truck - Concrete	425	4	79	40%	75	61	
Backhoe - 2X4	68	1	78	40%	68	54	
Combined					84	70	

PG&E 12 kV Distribution Line						
Equipment Name	Proposed Project				Proposed Project	
	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 1500 feet (Leq dBA)	Calculated sound level at 3000 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	Calculated sound level at NR1, 2351 feet (Leq dBA)	Calculated sound level at NR2, 1331 feet (Leq dBA)
Pickup - 1/2 ton	48	45	39	34	41	46
Wire Trailer/Tensioner	56	53	47	42	49	54
Wire Puller	56	53	47	42	49	54
Crane - 35 Ton (Manlift)	50	47	41	36	43	48
Pickup - 1 Ton	48	45	39	34	41	46
Forklift - 15000 Reach	58	55	49	44	51	56
Pressure Digger - Lo-Drill (Tracked)	51	48	42	37	44	49
Truck - Dump 10-12 Yards	49	46	40	35	42	47
Skid steer loader	52	49	43	38	45	50
Truck - Concrete	55	52	46	41	48	53
Backhoe - 2X4	48	45	39	34	41	46
Combined	64	61	55	50	57	62

PG&E 12 kV Distribution Line				
Equipment Name	Alt 1 Calculated sound level at NR1,8850 feet (Leq dBA)	Alt 1 Calculated sound level at NR2a1, 5870 feet (Leq dBA)	Alt 2 Calculated sound level at NR1, 18550 feet (Leq) dBA	Alt 2 Calculated sound level at NR2a1, 1240 feet (Leq dBA)
Pickup - 1/2 ton	30	33	23	47
Wire Trailer/Tensioner	38	41	31	55
Wire Puller	38	41	31	55
Crane - 35 Ton (Manlift)	32	35	25	49
Pickup - 1 Ton	30	33	23	47
Forklift - 15000 Reach	40	43	33	57
Pressure Digger - Lo-Drill (Tracked)	33	36	26	50
Truck - Dump 10-12 Yards	31	34	24	48
Skid steer loader	34	37	27	51
Truck - Concrete	37	40	30	54
Backhoe - 2X4	30	33	23	47
Combined	45	49	39	62
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhl.bts.gov/view/dot/8895 .				

PG&E 500 kV Interconnection – Structure Foundation Installation						
Equipment Name	Anticipated Engine Output (horsepower)	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 1950 feet, Leq dBA	Calculated sound level at 500 feet, Leq dBA
Pressure Digger - Lo-Drill (Tracked)	275	1	84	20%	45	57
Truck - Concrete	425	4	79	40%	49	61
Pickup - 1 Ton	410	4	75	40%	45	57
Truck - Water 4,000 Gallons	300	2	72	40%	39	51
Truck - Dump 10-12 Yards	415	2	76	40%	43	55
Skid steer loader	74	1	79	40%	43	55
Forklift - 10,000 Reach	130	2	88	20%	52	64
Crane - 35 Ton (Manlift)	250	1	81	16%	41	53
Loader - 4-5 Yards	230	1	79	40%	43	55
Rough Terrain Crane	185	1	81	16%	41	53
Motor Grader	250	1	85	40%	49	61
D6 Type Dozer	250	1	82	40%	46	58
Excavator	250	1	81	40%	45	57
Vibratory Roller	125	1	80	20%	41	53
Combined					58	69

PG&E 500 kV Interconnection – Structure Foundation Installation						
Equipment Name	Calculated sound level at 1000 feet, Leq dBA	Calculated sound level at 1500 feet, Leq dBA	Calculated sound level at 2500 feet, Leq dBA	Calculated sound level at 5000 feet, Leq dBA	Proposed Project Calculated sound Level at NR1, 4025 feet	Proposed Project Calculated sound Level at NR2, 4070 feet
Pressure Digger - Lo-Drill (Tracked)	51	47	43	37	39	39
Truck - Concrete	55	51	47	41	43	43
Pickup - 1 Ton	51	47	43	37	39	39
Truck - Water 4,000 Gallons	45	41	37	31	33	33
Truck - Dump 10-12 Yards	49	45	41	35	37	37
Skid steer loader	49	45	41	35	37	37
Forklift - 10,000 Reach	58	54	50	44	46	46
Crane - 35 Ton (Manlift)	47	43	39	33	35	35
Loader - 4-5 Yards	49	45	41	35	37	37
Rough Terrain Crane	47	43	39	33	35	35
Motor Grader	55	51	47	41	43	43
D6 Type Dozer	52	48	44	38	40	40
Excavator	51	47	43	37	39	39
Vibratory Roller	47	43	39	33	35	35
Combined	63	60	55	49	51	51

PG&E 500 kV Interconnection – Structure Foundation Installation				
Equipment Name	Alt 1 Calculated sound Level at NR1, 9450 feet	Alt 1 Calculated sound Level at NR2a1, 10950 feet	Alt 2 Calculated sound Level at NR1, 19670 feet	Alt 2 Calculated sound Level at NR6, 1130 feet
Pressure Digger - Lo-Drill (Tracked)	31	30	25	50
Truck - Concrete	35	34	29	54
Pickup - 1 Ton	31	30	25	50
Truck - Water 4,000 Gallons	25	24	19	44
Truck - Dump 10-12 Yards	29	28	23	48
Skid steer loader	29	28	23	48
Forklift - 10,000 Reach	38	37	32	57
Crane - 35 Ton (Manlift)	27	26	21	46
Loader - 4-5 Yards	29	28	23	48
Rough Terrain Crane	27	26	21	46
Motor Grader	35	34	29	54
D6 Type Dozer	32	31	26	51
Excavator	31	30	25	50
Vibratory Roller	27	26	21	46
Combined	44	43	37	62
<p>Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.ntl.bts.gov/view/dot/8895.</p>				

PG&E 500 kV Interconnection – Structure Installation: with helicopter						
Equipment Name	Anticipated Engine Output (horsepower)	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 1950 feet, Leq dBA	Calculated sound level at 500 feet, Leq dBA
Crane - 35 Ton (Manlift)	250	2	81	16%	44	56
Helicopter - Heavy Duty	3200	1	106	50%	72	84
Jet Fuel Truck	300	1	72	40%	36	48
Pickup - 1/2 ton	395	2	75	40%	42	54
Forklift - 15,000 Pounds	130	1	88	20%	49	61
Pickup - 1 ton	410	2	75	40%	42	54
Crane - 200 Ton	275	1	81	16%	41	53
844 Loader	417	1	79	40%	43	55
Truck - Water 4,000 Gallons	300	2	72	40%	39	51
Combined					72	84

PG&E 500 kV Interconnection – Structure Installation: with helicopter						
Equipment Name	Calculated sound level at 1000 feet, Leq dBA	Calculated sound level at 1500 feet, Leq dBA	Calculated sound level at 2500 feet, Leq dBA	Calculated sound level at 5000 feet, Leq dBA	Proposed Project Calculated sound Level at NR1, 4025 feet	Proposed Project Calculated sound Level at NR2, 4070 feet
Crane - 35 Ton (Manlift)	50	46	42	36	38	38
Helicopter - Heavy Duty	78	74	70	64	66	66
Jet Fuel Truck	42	38	34	28	30	30
Pickup - 1/2 ton	48	44	40	34	36	36
Forklift - 15,000 Pounds	55	51	47	41	43	43
Pickup - 1 ton	48	44	40	34	36	36
Crane - 200 Ton	47	43	39	33	35	35
844 Loader	49	45	41	35	37	37
Truck - Water 4,000 Gallons	45	41	37	31	33	33
Combined	78	75	70	64	66	66

PG&E 500 kV Interconnection – Structure Installation: with helicopter				
Equipment Name	Alt 1 Calculated sound Level at NR1, 9450 feet	Alt 1 Calculated sound Level at NR2a1, 10950 feet	Alt 2 Calculated sound Level at NR1, 19670 feet	Alt 2 Calculated sound Level at NR6, 1130 feet
Crane - 35 Ton (Manlift)	30	29	24	49
Helicopter - Heavy Duty	58	57	52	77
Jet Fuel Truck	22	21	16	41
Pickup - 1/2 ton	28	27	22	47
Forklift - 15,000 Pounds	35	34	29	54
Pickup - 1 ton	28	27	22	47
Crane - 200 Ton	27	26	21	46
844 Loader	29	28	23	48
Truck - Water 4,000 Gallons	25	24	19	44
Combined	59	57	52	77
<p>Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhtl.bts.gov/view/dot/8895.</p>				

PG&E 500 kV Interconnection – Conductor Installation: with helicopter						
Equipment Name	Anticipated Engine Output (horsepower)	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 1950 feet, Leq dBA	Calculated sound level at 500 feet, Leq dBA
Helicopter – Light Duty (700 HP)4	700	1	101	50%	66	78
Jet Fuel Truck	300	1	72	40%	36	48
Crane - 35 Ton (Manlift)	250	6	81	16%	49	61
Pickup Truck (1-Ton, 410 HP)	395	4	75	40%	45	57
Pickup - 1 Ton	410	4	75	40%	45	57
Dozer (D8 Type, 200 HP)	200	3	82	40%	51	63
Combined					66	78

PG&E 500 kV Interconnection – Conductor Installation: with helicopter						
Equipment Name	Calculated sound level at 1000 feet, Leq dBA	Calculated sound level at 1500 feet, Leq dBA	Calculated sound level at 2500 feet, Leq dBA	Calculated sound level at 5000 feet, Leq dBA	Proposed Project Calculated sound Level at NR1, 4025 feet	Proposed Project Calculated sound Level at NR2, 4070 feet
Helicopter – Light Duty (700 HP)4	72	68	64	58	60	60
Jet Fuel Truck	42	38	34	28	30	30
Crane - 35 Ton (Manlift)	55	51	47	41	43	43
Pickup Truck (1-Ton, 410 HP)	51	47	43	37	39	39
Pickup - 1 Ton	51	47	43	37	39	39
Dozer (D8 Type, 200 HP)	57	53	49	43	45	45
Combined	72	69	64	58	60	60

PG&E 500 kV Interconnection – Conductor Installation: with helicopter				
Equipment Name	Alt 1 Calculated sound Level at NR1, 9450 feet	Alt 1 Calculated sound Level at NR2a1, 10950 feet	Alt 2 Calculated sound Level at NR1, 19670 feet	Alt 2 Calculated sound Level at NR6, 1130 feet
Helicopter – Light Duty (700 HP)4	52	51	46	71
Jet Fuel Truck	22	21	16	41
Crane - 35 Ton (Manlift)	35	34	29	54
Pickup Truck (1-Ton, 410 HP)	31	30	25	50
Pickup - 1 Ton	31	30	25	50
Dozer (D8 Type, 200 HP)	37	36	31	56
Combined	53	51	46	71
<p>Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhl.bts.gov/view/dot/8895.</p>				

PG&E 500 kV Interconnection – Structure Installation: without helicopter						
Equipment Name	Anticipated Engine Output (horsepower)	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 1950 feet, Leq dBA	Calculated sound level at 500 feet, Leq dBA
Crane - 35 Ton (Manlift)	250	2	81	16%	44	56
Jet Fuel Truck	300	1	72	40%	36	48
Pickup - 1/2 ton	395	2	75	40%	42	54
Forklift - 15,000 Pounds	130	1	88	20%	49	61
Pickup - 1 ton	410	2	75	40%	42	54
Crane - 200 Ton	275	1	81	16%	41	53
844 Loader	417	1	79	40%	43	55
Truck - Water 4,000 Gallons	300	2	72	40%	39	51
Combined					53	64

PG&E 500 kV Interconnection – Structure Installation: without helicopter						
Equipment Name	Calculated sound level at 1000 feet, Leq dBA	Calculated sound level at 1500 feet, Leq dBA	Calculated sound level at 2500 feet, Leq dBA	Calculated sound level at 5000 feet, Leq dBA	Proposed Project Calculated sound Level at NR1, 4025 feet	Proposed Project Calculated sound Level at NR2, 4070 feet
Crane - 35 Ton (Manlift)	50	46	42	36	38	38
Jet Fuel Truck	42	38	34	28	30	30
Pickup - 1/2 ton	48	44	40	34	36	36
Forklift - 15,000 Pounds	55	51	47	41	43	43
Pickup - 1 ton	48	44	40	34	36	36
Crane - 200 Ton	47	43	39	33	35	35
844 Loader	49	45	41	35	37	37
Truck - Water 4,000 Gallons	45	41	37	31	33	33
Combined	58	55	50	44	46	46

PG&E 500 kV Interconnection – Structure Installation: without helicopter				
Equipment Name	Alt 1 Calculated sound Level at NR1, 9450 feet	Alt 1 Calculated sound Level at NR2a1, 10950 feet	Alt 2 Calculated sound Level at NR1, 19670 feet	Alt 2 Calculated sound Level at NR6, 1130 feet
Crane - 35 Ton (Manlift)	30	29	24	49
Jet Fuel Truck	22	21	16	41
Pickup - 1/2 ton	28	27	22	47
Forklift - 15,000 Pounds	35	34	29	54
Pickup - 1 ton	28	27	22	47
Crane - 200 Ton	27	26	21	46
844 Loader	29	28	23	48
Truck - Water 4,000 Gallons	25	24	19	44
Combined	39	38	33	57
<p>Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.ntl.bts.gov/view/dot/8895.</p>				

PG&E 500 kV Interconnection – Conductor Installation: without helicopter						
Equipment Name	Anticipated Engine Output (horsepower)	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 1950 feet, Leq dBA	Calculated sound level at 500 feet, Leq dBA
Jet Fuel Truck	300	1	72	40%	36	48
Crane - 35 Ton (Manlift)	250	6	81	16%	49	61
Pickup Truck (1-Ton, 410 HP)	395	4	75	40%	45	57
Pickup - 1 Ton	410	4	75	40%	45	57
Dozer (D8 Type, 200 HP)	200	3	82	40%	51	63
Combined					54	66

PG&E 500 kV Interconnection – Conductor Installation: without helicopter						
Equipment Name	Calculated sound level at 1000 feet, Leq dBA	Calculated sound level at 1500 feet, Leq dBA	Calculated sound level at 2500 feet, Leq dBA	Calculated sound level at 5000 feet, Leq dBA	Proposed Project Calculated sound Level at NR1, 4025 feet	Proposed Project Calculated sound Level at NR2, 4070 feet
Jet Fuel Truck	42	38	34	28	30	30
Crane - 35 Ton (Manlift)	55	51	47	41	43	43
Pickup Truck (1-Ton, 410 HP)	51	47	43	37	39	39
Pickup - 1 Ton	51	47	43	37	39	39
Dozer (D8 Type, 200 HP)	57	53	49	43	45	45
Combined	60	57	52	46	48	48

PG&E 500 kV Interconnection – Conductor Installation: without helicopter				
Equipment Name	Alt 1 Calculated sound Level at NR1, 9450 feet	Alt 1 Calculated sound Level at NR2a1, 10950 feet	Alt 2 Calculated sound Level at NR1, 19670 feet	Alt 2 Calculated sound Level at NR6, 1130 feet
Jet Fuel Truck	22	21	16	41
Crane - 35 Ton (Manlift)	35	34	29	54
Pickup Truck (1-Ton, 410 HP)	31	30	25	50
Pickup - 1 Ton	31	30	25	50
Dozer (D8 Type, 200 HP)	37	36	31	56
Combined	41	39	34	59
<p>Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhtl.bts.gov/view/dot/8895.</p>				

LSPGC 230 kV Overhead Segment – Access Road Construction							
Equipment Name	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	
Pickup - 1/2 ton		395	2	75	40%	68	54
Pickup - 1 ton		410	2	75	40%	68	54
Motor Grader		250	1	85	40%	75	61
Truck - Dump 10-12 Yards		415	2	76	40%	69	55
Skid steer loader		74	1	79	40%	69	55
Truck - Water 4000 Gallons		300	2	72	40%	65	51
D6 Type Dozer		250	1	82	40%	72	58
Excavator		250	1	81	40%	71	57
Combined						80	66

LSPGC 230 kV Overhead Segment – Access Road Construction							
Equipment Name	Calculated sound level at				Proposed Project		
	1000 feet (Leq dBA)	1500 feet (Leq dBA)	2500 feet (Leq dBA)	5000 feet (Leq dBA)	Caclulated sound level at NR1, 4500 feet (Leq dBA)	Calculated sound level at NR2, 4,107 feet (Leq dBA)	
Pickup - 1/2 ton	48	44	40	34	35	36	
Pickup - 1 ton	48	44	40	34	35	36	
Motor Grader	55	51	47	41	42	43	
Truck - Dump 10-12 Yards	49	45	41	35	36	37	
Skid steer loader	49	45	41	35	36	37	
Truck - Water 4000 Gallons	45	41	37	31	32	33	
D6 Type Dozer	52	48	44	38	39	40	
Excavator	51	47	43	37	38	39	
Combined	60	56	52	46	46	47	

LSPGC 230 kV Overhead Segment – Access Road Construction						
Equipment Name	Alt 1 Calculated sound level at NR1, 4690 feet (Leq dBA)	Alt 1 Calculated sound level at NR2a1, 5560 feet (Leq dBA)	Alt 2 Calculated sound level at NR1, 5580 feet (Leq dBA)	Alt 2 Calculated sound level at NR6, 5700 feet (Leq dBA)	Alt 4 Calculated sound level at NR1, 3940 feet (Leq dBA)	Alt 4 Calculated sound level at NR6, 4990 feet (Leq dBA)
Pickup - 1/2 ton	35	33	33	33	36	34
Pickup - 1 ton	35	33	33	33	36	34
Motor Grader	42	40	40	40	43	41
Truck - Dump 10-12 Yards	36	34	34	34	37	35
Skid steer loader	36	34	34	34	37	35
Truck - Water 4000 Gallons	32	30	30	30	33	31
D6 Type Dozer	39	37	37	37	40	38
Excavator	38	36	36	36	39	37
Combined	46	45	45	44	48	46
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhl.bts.gov/view/dot/8895 .						

LSPGC 230 kV Overhead Segment – Structure Foundation Installation						
Equipment Name	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)
Pressure Digger - Lo-Drill (Tracked)	275	1	84	20%	71	57
Truck - Concrete	425	4	79	40%	75	61
Pickup - 1 Ton	410	4	75	40%	71	57
Truck - Water 4000 Gallons	300	2	72	40%	65	51
Truck - Dump 10-12 Yards	415	2	76	40%	69	55
Skid steer loader	74	1	79	40%	69	55
Forklift - 10000 Reach	130	2	88	20%	78	64
Crane - 35 Ton (Manlift)	250	1	81	16%	67	53
844 Loader	417	1	79	40%	69	55
Rough Terrain Crane	185	1	81	16%	67	53
Combined					82	68

LSPGC 230 kV Overhead Segment – Structure Foundation Installation						
Equipment Name	Proposed Project				Proposed Project	
	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 1500 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	Calculated sound level at NR1, 4500 feet (Leq dBA)	Calculated sound level at NR2, 4,107 feet (Leq dBA)
Pressure Digger - Lo-Drill (Tracked)	51	47	43	37	38	39
Truck - Concrete	55	51	47	41	42	43
Pickup - 1 Ton	51	47	43	37	38	39
Truck - Water 4000 Gallons	45	41	37	31	32	33
Truck - Dump 10-12 Yards	49	45	41	35	36	37
Skid steer loader	49	45	41	35	36	37
Forklift - 10000 Reach	58	54	50	44	45	46
Crane - 35 Ton (Manlift)	47	43	39	33	34	35
844 Loader	49	45	41	35	36	37
Rough Terrain Crane	47	43	39	33	34	35
Combined	62	58	54	48	49	50

LSPGC 230 kV Overhead Segment – Structure Foundation Installation						
Equipment Name	Alt 1 Calculated sound level at NR1, 4690 feet (Leq dBA)	Alt 1 Calculated sound level at NR2a1, 5560 feet (Leq dBA)	Alt 2 Calculated sound level at NR1, 5580 feet (Leq dBA)	Alt 2 Calculated sound level at NR6, 5700 feet (Leq dBA)	Alt 4 Calculated sound level at NR1, 3940 feet (Leq dBA)	Alt 4 Calculated sound level at NR6, 4990 feet (Leq dBA)
Pressure Digger - Lo-Drill (Tracked)	37.5	36	36	36	39	37
Truck - Concrete	41.5	40	40	40	43	41
Pickup - 1 Ton	37.5	36	36	36	39	37
Truck - Water 4000 Gallons	31.5	30	30	30	33	31
Truck - Dump 10-12 Yards	35.5	34	34	34	37	35
Skid steer loader	35.5	34	34	34	37	35
Forklift - 10000 Reach	44.5	43	43	43	46	44
Crane - 35 Ton (Manlift)	33.5	32	32	32	35	33
844 Loader	35.5	34	34	34	37	35
Rough Terrain Crane	33.5	32	32	32	35	33
Combined	48.5	47	47	47	50	48
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.ntl.bts.gov/view/dot/8895 .						

LSPGC 230 kV Overhead Segment – Structure Installation							
Equipment Name	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	
Crane - 35 Ton (Manlift)		250	2	81	16%	70	56
Pickup - 1/2 ton		395	2	75	40%	68	54
Forklift - 15000 Pounds		130	1	88	20%	75	61
Pickup - 1 Ton		410	2	75	40%	68	54
Crane - 200 Ton		275	1	81	16%	67	53
844 Loader		417	1	79	40%	69	55
Truck - Water 4000 Gallons		300	2	72	40%	65	51
Combined						78	64

LSPGC 230 kV Overhead Segment – Structure Installation						
Equipment Name	Calculated sound level at				Proposed Project	Proposed Project
	1000 feet (Leq dBA)	1500 feet (Leq dBA)	2500 feet (Leq dBA)	5000 feet (Leq dBA)	Cacluated sound level at NR1, 4500 feet (Leq dBA)	Calculated sound level at NR2, 4,107 feet (Leq dBA)
Crane - 35 Ton (Manlift)	50	46	42	36	37	38
Pickup - 1/2 ton	48	44	40	34	35	36
Forklift - 15000 Pounds	55	51	47	41	42	43
Pickup - 1 Ton	48	44	40	34	35	36
Crane - 200 Ton	47	43	39	33	34	35
844 Loader	49	45	41	35	36	37
Truck - Water 4000 Gallons	45	41	37	31	32	33
Combined	58	55	50	44	45	46

LSPGC 230 kV Overhead Segment – Structure Installation						
Equipment Name	Alt 1 Caclated sound level at NR1, 4690 feet (Leq dBA)	Alt 1 Calculated sound level at NR2a1, 5560 feet (Leq dBA)	Alt 2 Caclated sound level at NR1, 5580 feet (Leq dBA)	Alt 2 Calculated sound level at NR6, 5700 feet (Leq dBA)	Alt 4 Caclated sound level at NR1, 3940 feet (Leq dBA)	Alt 4 Calculated sound level at NR6, 4990 feet (Leq dBA)
Crane - 35 Ton (Manlift)	37	35	35	35	38	36
Pickup - 1/2 ton	35	33	33	33	36	34
Forklift - 15000 Pounds	42	40	40	40	43	41
Pickup - 1 Ton	35	33	33	33	36	34
Crane - 200 Ton	34	32	32	32	35	33
844 Loader	36	34	34	34	37	35
Truck - Water 4000 Gallons	32	30	30	30	33	31
Combined	45	44	44	43	47	44
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User’s Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.ntl.bts.gov/view/dot/8895 .						

LSPGC 230 kV Overhead Segment – Conductor Installation Inclusive of Helicopter Use							
Equipment Name	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	
Helicopter – Light Duty		700	1	101	50%	92	78
Jet Fuel Truck		300	1	72	40%	62	48
Crane - 35 Ton (Manlift)		250	6	81	16%	75	61
Pickup - 1/2 ton		395	4	75	40%	71	57
Pickup - 1 Ton		410	4	75	40%	71	57
D8 Sag Dozer		200	3	82	40%	77	63
Wire Puller		175	1	85	50%	76	62
Truck - Water 4000 Gallons		300	2	72	40%	65	51
Wire Trailer/Tensioner		175	1	85	50%	76	62
Combined						92	78

LSPGC 230 kV Overhead Segment – Conductor Installation Inclusive of Helicopter Use							
Equipment Name	Proposed Project				Proposed Project		
	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 1500 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	Cacluated sound level at NR1, 4500 feet (Leq dBA)	Calculated sound level at NR2, 4,107 feet (Leq dBA)	
Helicopter – Light Duty	72	68	64	58	59	60	
Jet Fuel Truck	42	38	34	28	29	30	
Crane - 35 Ton (Manlift)	55	51	47	41	42	43	
Pickup - 1/2 ton	51	47	43	37	38	39	
Pickup - 1 Ton	51	47	43	37	38	39	
D8 Sag Dozer	57	53	49	43	44	45	
Wire Puller	56	52	48	42	43	44	
Truck - Water 4000 Gallons	45	41	37	31	32	33	
Wire Trailer/Tensioner	56	52	48	42	43	44	
Combined	72	69	64	58	59	60	

LSPGC 230 kV Overhead Segment – Conductor Installation Inclusive of Helicopter Use						
Equipment Name	Alt 1 Calculated sound level at NR1, 4690 feet (Leq dBA)	Alt 1 Calculated sound level at NR2a1, 5560 feet (Leq dBA)	Alt 2 Calculated sound level at NR1, 5580 feet (Leq dBA)	Alt 2 Calculated sound level at NR6, 5700 feet (Leq dBA)	Alt 4 Calculated sound level at NR1, 3940 feet (Leq dBA)	Alt 4 Calculated sound level at NR6, 4990 feet (Leq dBA)
Helicopter – Light Duty	59	57	57	57	60	58
Jet Fuel Truck	29	27	27	27	30	28
Crane - 35 Ton (Manlift)	42	40	40	40	43	41
Pickup - 1/2 ton	38	36	36	36	39	37
Pickup - 1 Ton	38	36	36	36	39	37
D8 Sag Dozer	44	42	42	42	45	43
Wire Puller	43	41	41	41	44	42
Truck - Water 4000 Gallons	32	30	30	30	33	31
Wire Trailer/Tensioner	43	41	41	41	44	42
Combined	59	58	58	57	61	58
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User’s Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.ntl.bts.gov/view/dot/8895 .						

LSPGC 230 kV Overhead Segment – Conductor Installation, Ground-based Work Only							
Equipment Name	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	
Jet Fuel Truck		300	1	72	40%	62	48
Crane - 35 Ton (Manlift)		250	6	81	16%	75	61
Pickup - 1/2 ton		395	4	75	40%	71	57
Pickup - 1 Ton		410	4	75	40%	71	57
D8 Sag Dozer		200	3	82	40%	77	63
Wire Puller		175	1	85	50%	76	62
Truck - Water 4000 Gallons		300	2	72	40%	65	51
Wire Trailer/Tensioner		175	1	85	50%	76	62
Combined						83	69

LSPGC 230 kV Overhead Segment – Conductor Installation, Ground-based Work Only						
Equipment Name	Calculated sound level at				Proposed Project	
	1000 feet (Leq dBA)	1500 feet (Leq dBA)	2500 feet (Leq dBA)	5000 feet (Leq dBA)	Cacluated sound level at NR1, 4500 feet (Leq dBA)	Calculated sound level at NR2, 4,107 feet (Leq dBA)
Jet Fuel Truck	42	38	34	28	29	30
Crane - 35 Ton (Manlift)	55	51	47	41	42	43
Pickup - 1/2 ton	51	47	43	37	38	39
Pickup - 1 Ton	51	47	43	37	38	39
D8 Sag Dozer	57	53	49	43	44	45
Wire Puller	56	52	48	42	43	44
Truck - Water 4000 Gallons	45	41	37	31	32	33
Wire Trailer/Tensioner	56	52	48	42	43	44
Combined	63	59	55	49	50	50

LSPGC 230 kV Overhead Segment – Conductor Installation, Ground-based Work Only						
Equipment Name	Alt 1 Caclulated sound level at NR1, 4690 feet (Leq dBA)	Alt 1 Calculated sound level at NR2a1, 5560 feet (Leq dBA)	Alt 2 Caclulated sound level at NR1, 5580 feet (Leq dBA)	Alt 2 Calculated sound level at NR6, 5700 feet (Leq dBA)	Alt 4 Caclulated sound level at NR1, 3940 feet (Leq dBA)	Alt 4 Calculated sound level at NR6, 4990 feet (Leq dBA)
Jet Fuel Truck	29	27	27	27	30	28
Crane - 35 Ton (Manlift)	42	40	40	40	43	41
Pickup - 1/2 ton	38	36	36	36	39	37
Pickup - 1 Ton	38	36	36	36	39	37
D8 Sag Dozer	44	42	42	42	45	43
Wire Puller	43	41	41	41	44	42
Truck - Water 4000 Gallons	32	30	30	30	33	31
Wire Trailer/Tensioner	43	41	41	41	44	42
Combined	49	48	48	48	51	49
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User’s Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.ntl.bts.gov/view/dot/8895 .						

LSPGC 230 kV Submarine Segment – Northern Transition Approach Construction							
			FHWA RCNM Construction				
Equipment Name	Horespower	Estimated number of units	FHWA RCNM Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	
Onshore Excavator	600	1	81	40%	71	56.7	
Onshore End Loader	250	1	79	40%	69	55.1	
Onshore Crane	180	1	81	16%	67	52.6	
Air Compressor	50	1	78	40%	68	53.7	
Truck - Dump 10-12 Yards	415	1	76	40%	66	52.5	
Onshore Dewatering Equipment	50	2	85	50%	79	65	
Combined					80.6	66.6	

LSPGC 230 kV Submarine Segment – Northern Transition Approach Construction						
Equipment Name	Calculated sound level at				Proposed Project	Proposed Project
	1000 feet (Leq dBA)	1500 feet (Leq dBA)	2500 feet (Leq dBA)	5000 feet (Leq dBA)	Calculated sound level at NR1, 4400 feet (Leq dBA)	Calculated sound level at NR2, 5500 feet (Leq dBA)
Onshore Excavator	50.7	47	43	37	38	36
Onshore End Loader	49.1	46	41	35	36	34
Onshore Crane	46.6	43	39	33	34	32
Air Compressor	47.7	44	40	34	35	33
Truck - Dump 10-12 Yards	46.5	43	39	33	34	32
Onshore Dewatering Equipment	59	56	51	45	46	44
Combined	60.6	57	53	47	48	46

LSPGC 230 kV Submarine Segment – Northern Transition Approach Construction					
Equipment Name	Alt 1 Calculated sound level at NR1, 2750 feet (Leq dBA)	Alt 1 Calculated sound level at NR2a1, 10400 feet (Leq dBA)	Alt 2 Calculated sound level at NR6, 24500 feet (Leq dBA)	Alt 4 Calculated sound level at NR1,3890 feet (Leq dBA)	Proposed Project Calculated sound level at NR2, 6015 feet (Leq dBA)3
Onshore Excavator	42	30	23	40	36
Onshore End Loader	40	29	21	35	31
Onshore Crane	38	26	19	32	28
Air Compressor	39	27	20	33	29
Truck - Dump 10-12 Yards	38	26	19	31	27
Onshore Dewatering Equipment	50	39	31	37	33
Combined	52	40	33	44	40
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User’s Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhl.bts.gov/view/dot/8895 .					

230 kV submarine segment – Daytime Work						
Construction equipment	Analog Equipment	Lmax at 50 feet (dBA)	Number	Hours of Use (Total)	Hours of Use Daytime	Days of Use
Water Pumps	Diesel pump	78	2	15	12	122
Deck Generator	—	81	2	21	12	122
Deck Equipment 100 hp diesel	—	81	1	21	12	122
Anchor Winches	—	85	2	12	12	122
Deck Winch	—	85	1	12	12	122
Crane	—	81	1	5	5	122
Linear Cable Engine	—	85	1	12	12	122
Barge Tug	—	87	4	11	11	122
Deck Generator - 100kW	—	81	2	17	12	122
Small Boats	tugboat	85	1	16	12	122
diesel	—	81	2	6	6	67
Crane	—	81	1	2	2	67
Dive Compressor	Air compressor	78	1	2	2	67
Deck Generator	Portable generator	81	1	12	12	67
Anchor Tug	—	87	1	22	12	70
Deck Generator - 100kW	—	81	1	22	12	70
Survey Vessel	—	81	1	11	11	18
Pull In Winch	tugboat	90	1	11	11	20

230 kV submarine segment – Daytime Work					
Construction equipment	Calculated sound level at 50 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2000 feet (Leq dBA)	Calculated sound level at 3000 feet (Leq dBA)	Calculated sound level at 4000 feet (Leq dBA)
Water Pumps	81	55	49	45	43
Deck Generator	84	58	52	48	46
Deck Equipment 100 hp diesel	81	55	49	45	43
Anchor Winches	88	62	56	52	50
Deck Winch	85	59	53	49	47
Crane	77	51	45	42	39
Linear Cable Engine	85	59	53	49	47
Barge Tug	93	67	61	57	55
Deck Generator - 100kW	84	58	52	48	46
Small Boats	85	59	53	49	47
Deck Equipment 100 hp diesel	81	55	49	45	43
Crane	73	47	41	38	35
Dive Compressor	70	44	38	34	32
Deck Generator	81	55	49	45	43
Anchor Tug	87	61	55	51	49
Deck Generator - 100kW	81	55	49	45	43
Survey Vessel	81	55	49	45	43
Pull In Winch	90	64	58	54	52
Combined	98	72	66	62	60
Solano levee insertion loss	10	10	11	12	10
Solano after insertion loss	88	62	55	50	50
Existing sound Level at Receptor					
Combined Project and Existing at Receptor					
City of Pittsburg wall insertion loss	10	11	12	13	10
City of Pittsburg after insertion loss	88	61	54	49	50
Existing sound Level at Receptor					
Combined Project and Existing at Receptor					

230 kV submarine segment – Daytime Work					
Construction equipment	Calculated sound level at 5000 feet (Leq dBA)	Calculated sound level at 6000 feet (Leq dBA)	Calculated sound level at 7000 feet (Leq dBA)	Proposed Project Cacluated sound level at NR3, 2400 feet (Leq dBA)	Proposed Project Calculated sound level at NR1, 2750 feet (Leq dBA)
Water Pumps	41	39	38	47	46
Deck Generator	44	42	41	50	49
Deck Equipment 100 hp diesel	41	39	38	47	46
Anchor Winches	48	46	45	54	53
Deck Winch	45	43	42	51	50
Crane	37	36	34	44	42
Linear Cable Engine	45	43	42	51	50
Barge Tug	53	51	50	59	58
Deck Generator - 100kW	44	42	41	50	49
Small Boats	45	43	42	51	50
Deck Equipment 100 hp diesel	41	39	38	47	46
Crane	33	32	30	40	38
Dive Compressor	30	28	27	36	35
Deck Generator	41	39	38	47	46
Anchor Tug	47	45	44	53	52
Deck Generator - 100kW	41	39	38	47	46
Survey Vessel	41	39	38	47	46
Pull In Winch	50	48	47	56	55
Combined	58	56	55	64	63
Solano levee insertion loss	10	10	10	10	10
Solano after insertion loss	48	46	45	54	53
Existing sound Level at Receptor					48
Combined Project and Existing at Receptor					54
City of Pittsburg wall insertion loss	10	10	10	10	
City of Pittsburg after insertion loss	48	46	45	54	
Existing sound Level at Receptor					46
Combined Project and Existing at Receptor					55

230 kV submarine segment – Daytime Work			
Construction equipment	Alt 1 Calculated sound level at NR1, 2850 feet (Leq dBA)	Alt 1 Calculated sound level at NR2a1, 10400 feet (Leq dBA)	Alt 2 Calculated sound level at NR6, 24500 feet (Leq dBA)2
Water Pumps	46	35	27
Deck Generator	49	38	30
Deck Equipment 100 hp diesel	46	35	27
Anchor Winches	53	42	34
Deck Winch	50	39	31
Crane	42	31	23
Linear Cable Engine	50	39	31
Barge Tug	58	46	39
Deck Generator - 100kW	49	38	30
Small Boats	50	39	31
Deck Equipment 100 hp diesel	46	35	27
Crane	38	27	19
Dive Compressor	35	24	16
Deck Generator	46	35	27
Anchor Tug	52	41	33
Deck Generator - 100kW	46	35	27
Survey Vessel	46	34	27
Pull In Winch	55	43	36
Combined	63	52	44
Solano levee insertion loss	10	10	10
Solano after insertion loss	53	42	34
Existing sound Level at Receptor	48	48	48
Combined Project and Existing at Receptor	54	49	48
City of Pittsburg wall insertion loss	10	10	10
City of Pittsburg after insertion loss	53	42	34
Existing sound Level at Receptor			
Combined Project and Existing at Receptor			

230 kV submarine segment – Nighttime Work							
Construction equipment	Analog Equipment	Lmax at 50 feet (dBA)	Number	Hours of Use (Total)	Hours of Use Night (Total Hours of Use – X)	Days of Use	Usage Factor (Hours of use/12)
Water Pumps	Diesel pump	78	2	15	3	122	25%
Deck Generator	—	81	2	21	9	122	75%
Deck Equipment 100 hp diesel	—	81	1	21	9	122	75%
Deck Generator - 100kW	—	81	2	17	5	122	42%
Small Boats	tugboat	85	1	16	4	122	33%

230 kV submarine segment – Nighttime Work							
Construction equipment	Analog Equipment	Calculated sound level at 50 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2000 feet (Leq dBA)	Calculated sound level at 3000 feet (Leq dBA)	Calculated sound level at 4000 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)
Water Pumps	Diesel pump	72	46	40	36	34	32
Deck Generator	—	77	51	45	41	39	37
hp diesel	—	75	49	43	39	37	35
100kW	—	74	48	42	38	36	34
Small Boats	tugboat	78	52	46	42	40	38
Combined		83	57	51	47	45	43
Solano levee insertion loss		10	10	11	12	10	10
Solano after insertion loss		73	47	40	35	35	33
Existing sound Level at Receptor							
Combined Project and Existing at Receptor							
City of Pittsburg wall insertion loss		10	10	11	12	10	10
City of Pittsburg after insertion loss		73	47	40	35	35	33
Existing sound Level at Receptor							
Combined Project and Existing at Receptor							

230 kV submarine segment – Nighttime Work							
Construction equipment	Analog Equipment	Calculated sound level at 6000 feet (Leq dBA)	Calculated sound level at 7000 feet (Leq dBA)	Cacluated sound level at NR3, 2400 feet (Leq dBA)	Proposed Project Calculated sound level at NR1, 2750 feet (Leq dBA)	Proposed Project Calculated sound level at NR2, 3965 feet (Leq dBA)	
Water Pumps	Diesel pump	30	29	38	37	34	
Deck Generator	—	35	34	43	42	39	
hp diesel	—	33	32	41	40	37	
100kW	—	32	31	40	39	36	
Small Boats	tugboat	36	35	44	43	40	
Combined		41	40	49	48	45	
Solano levee insertion loss		10	10	10	10	10	
Solano after insertion loss		31	30	39	38	35	
Existing sound Level at Receptor					42	42	
Combined Project and Existing at Receptor					43	43	
City of Pittsburg wall insertion loss		10	10	10			
City of Pittsburg after insertion loss		31	30	39			
Existing sound Level at Receptor							40
Combined Project and Existing at Receptor							43

230 kV submarine segment – Nighttime Work				
Construction equipment	Analog Equipment	Alt 1 Calculated sound level at NR1, 2850 feet (Leq dBA)	Alt 1 Calculated sound level at NR2a1, 10400 feet (Leq dBA)	Alt 2 Calculated sound level at NR6, 24500 feet (Leq dBA)2
Water Pumps	Diesel pump	37	26	21
Deck Generator	—	42	31	29
hp diesel	—	40	29	26
100kW	—	39	28	26
Small Boats	tugboat	43	32	26
Combined		48	36	33
Solano levee insertion loss		10	10	10
Solano after insertion loss		38	26	23
Existing sound Level at Receptor		42	42	42
Combined Project and Existing at Receptor		43	42	42
City of Pittsburg wall insertion loss		10	10	10
City of Pittsburg after insertion loss		38	26	23

230 kV Submarine Segment Day/Night Leq

Construction equipment	Analog Equipment	Lmax at 50 feet (dBA)	Number	Hours of Night Use	Hours Day Use	Days of Use	Usage Factor (Hours of use/24)
Water Pumps	Diesel pump	78	2	3	12	122	63%
Deck Generator	—	81	2	9	12	122	88%
diesel	—	81	1	9	12	122	88%
Anchor Winches	—	85	2	0	12	122	50%
Deck Winch	—	85	1	0	12	122	50%
Crane	—	81	1	0	5	122	21%
Linear Cable Engine	—	85	1	0	12	122	50%
Barge Tug	—	87	4	0	11	122	46%
Deck Generator - 100kW	—	81	2	5	12	122	71%
Small Boats	tugboat	85	1	4	12	122	67%
diesel	—	81	2	0	6	67	25%
Crane	—	81	1	0	2	67	8%
Dive Compressor	Air compressor	90	1	0	2	67	8%
Deck Generator	Portable generator	81	1	0	12	67	50%
Anchor Tug	—	87	1	0	12	70	92%
Deck Generator - 100kW	—	81	1	0	12	70	92%
Survey Vessel	—	81	1	0	11	18	46%
Pull In Winch	tugboat	90	1	0	11	20	46%

230 kV Submarine Segment Day/Night Leq							
Construction equipment	Analog Equipment	Calculated sound level at 50 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2000 feet (Leq dBA)	Calculated sound level at 3000 feet (Leq dBA)	Calculated sound level at 4000 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)
Water Pumps	Diesel pump	82	56	50	47	44	42
Deck Generator	—	90	64	58	54	52	50
diesel	—	87	61	55	51	49	47
Anchor Winches	—	85	59	53	49	47	45
Deck Winch	—	82	56	50	46	44	42
Crane	—	74	48	42	38	36	34
Linear Cable Engine	—	82	56	50	46	44	42
Barge Tug	—	90	64	58	54	52	50
Deck Generator - 100kW	—	87	61	55	51	49	47
Small Boats	tugboat	87	61	55	52	49	47
diesel		79	53	47	43	41	39
Crane	—	71	45	39	35	33	31
Dive Compressor	Air compressor	80	54	48	44	42	40
Deck Generator	Portable generator	78	52	46	42	40	38
Anchor Tug	—	87	61	55	51	48	47
Deck Generator - 100kW	—	81	55	49	45	42	41
Survey Vessel	—	78	52	46	42	40	38
Pull In Winch	tugboat	87	61	55	51	49	47
Combined		98	72	66	62	60	58
Solano levee insertion loss		10	10	11	12	10	10
Solano after insertion loss		88	62	55	50	50	48
Existing sound Level at Receptor							
Combined Project and Existing at Receptor							
City of Pittsburg wall insertion loss		10	10	11	12	10	10
City of Pittsburg after insertion loss		88	62	55	50	50	48
Existing sound Level at Receptor							
Combined Project and Existing at Receptor							

230 kV Submarine Segment Day/Night Leq						
Construction equipment	Analog Equipment	Calculated sound level at 6000 feet (Leq dBA)	Calculated sound level at 7000 feet (Leq dBA)	Cacluated sound level at NR3, 2400 feet (Leq dBA)	Proposed Project Calculated sound level at NR1, 2750 feet (Leq dBA)	Proposed Project Calculated sound level at NR2, 3965 feet (Leq dBA)
Water Pumps	Diesel pump	41	39	49	47	44
Deck Generator	—	48	47	56	55	52
diesel	—	45	44	53	52	49
Anchor Winches	—	43	42	51	50	47
Deck Winch	—	40	39	48	47	44
Crane	—	32	31	40	39	36
Linear Cable Engine	—	40	39	48	47	44
Barge Tug	—	48	47	56	55	52
Deck Generator - 100kW	—	45	44	53	52	49
Small Boats	tugboat	46	45	54	53	49
diesel		37	36	45	44	41
Crane	—	29	28	37	36	33
Dive Compressor	Air compressor	38	37	46	45	42
Deck Generator	Portable generator	36	35	44	43	40
Anchor Tug	—	45	44	53	52	49
Deck Generator - 100kW	—	39	38	47	46	43
Survey Vessel	—	36	35	44	43	40
Pull In Winch	tugboat	45	44	53	52	49
Combined		56	55	64	63	60
Solano levee insertion loss		10	10	10	10	10
Solano after insertion loss		46	45	54	53	50
Existing sound Level at Receptor					48	48
Combined Project and Existing at Receptor					54	52
City of Pittsburg wall insertion loss		10	10	10		
City of Pittsburg after insertion loss		46	45	54		
Existing sound Level at Receptor				50		
Combined Project and Existing at Receptor						

230 kV Submarine Segment Day/Night Leq				
Construction equipment	Analog Equipment	Alt 1 Calculated sound level at NR1, 2850 feet (Leq dBA)	Alt 1 Calculated sound level at NR2a1, 10400 feet (Leq dBA)	Alt 2 Calculated sound level at NR6, 24500 feet (Leq dBA)2
Water Pumps	Diesel pump	47	36	28
Deck Generator	—	55	44	36
diesel	—	52	41	33
Anchor Winches	—	50	39	31
Deck Winch	—	47	36	28
Crane	—	39	28	20
Linear Cable Engine	—	47	36	28
Barge Tug	—	55	44	36
Deck Generator - 100kW	—	52	41	33
Small Boats	tugboat	52	41	34
diesel		44	32	25
Crane	—	36	25	17
Dive Compressor	Air compressor	45	34	26
Deck Generator	Portable generator	43	32	24
Anchor Tug	—	51	40	33
Deck Generator - 100kW	—	45	34	27
Survey Vessel	—	43	32	24
Pull In Winch	tugboat	52	41	33
Combined		63	51	44
Solano levee insertion loss		10	10	10
Solano after insertion loss		53	41	34
Existing sound Level at Receptor		48	48	48
Combined Project and Existing at Receptor		54	49	48
City of Pittsburg wall insertion loss		10	10	10
City of Pittsburg after insertion loss		53	41	34
Existing sound Level at Receptor				
Combined Project and Existing at Receptor				

Sources (Pages 70-73): Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. <https://rosap.ntl.bts.gov/view/dot/8895>; Epsilon Associates Inc. 2006. "Attachment J - Noise Impact Assessment." In Hudson River PCBs Superfund Site: Phase 1 Final Design Report. Prepared for General Electric Company. https://www3.epa.gov/udson/pdf/2006_03_21%20Phase%20I%20FDR%20ATTACHMENT%20J.pdf.

230 kV submarine southern transition approach					
Equipment Name	Horsepower	Quantity	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage factor	Calculated sound level at 50 feet (Leq dBA)
Onshore Crane	180	1	81	16%	73
Crane - 200 ton	275	1	81	16%	73
Onshore Vibratory Hammer	300	1	101	20%	94
Air Compressor	50	1	78	40%	74
Truck - Dump 10-12 Yd	415	4	76	40%	78
Onshore Dewatering Equip	50	2	85	50%	85
Combined					95

230 kV submarine southern transition approach

Equipment Name	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 250 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2000 feet (Leq dBA)	Calculated sound level at NR3, 2400 feet (Leq dBA)
Onshore Crane	67	59	53	47	41	39
Crane - 200 ton	67	59	53	47	41	39
Onshore Vibratory Hammer	88	80	74	68	62	60
Air Compressor	68	60	54	48	42	40
Truck - Dump 10-12 Yd	72	64	58	52	46	44
Onshore Dewatering Equip	79	71	65	59	53	51
Combined	89	81	75	69	63	61

Source (Page 74-75): Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. <https://rosap.nhl.bts.gov/view/dot/8895>.

LSPGC 230 kV Underground Segment – Substation Getaways					
Equipment Name	Anticipated Engine Output (horsepower)	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at distance 50 feet (Leq dBA)
Pickup - 1 Ton	410	4	75	40%	77
Welding Truck	395	2	74	40%	73
Generator – 25 kW	36	2	81	50%	81
Crane - 35 Ton (Manlift)	250	2	81	16%	76
Forklift - 10000 Reach	130	2	88	40%	87
Forklift -15000 Pounds	130	1	88	40%	84
Loader - 4-5 Yards	74	2	79	40%	78
Wire Trailer/ Tensioner	175	1	85	50%	82
Wire Puller	175	1	85	50%	82
Skid steer loader	74	2	79	40%	78
Backhoe - 2X4	68	2	78	40%	77
Combined					92

LSPGC 230 kV Underground Segment – Substation Getaways

Equipment Name	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 1500 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	Calculated sound level at NR3, 1900 feet (Leq dBA)
Pickup - 1 Ton	71	57	51	48	43	37	45
Welding Truck	67	53	47	44	39	33	41
Generator – 25 kW	75	61	55	52	47	41	49
Crane - 35 Ton (Manlift)	70	56	50	47	42	36	45
Forklift - 10000 Reach	81	67	61	58	53	47	55
Forklift -15000 Pounds	78	64	58	55	50	44	52
Loader - 4-5 Yards	72	58	52	49	44	38	46
Wire Trailer/ Tensioner	76	62	56	52	48	42	50
Wire Puller	76	62	56	52	48	42	50
Skid steer loader	72	58	52	49	44	38	46
Backhoe - 2X4	71	57	51	48	43	37	45
Combined	86	72	66	62	58	52	60

Source (Pages 76-77): Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. <https://rosap.ntl.bts.gov/view/dot/8895>.

PG&E Substation Modifications							
Equipment	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at X50 feet (Leq dBA)	Calculated sound level at 100 feet (Leq dBA)	
Pickup - 1/2 Ton		395	4	75	40%	77	71
Pickup - 1 Ton		410	4	75	40%	77	71
Welding Truck		395	2	74	40%	73	67
Crane - 35 Ton (Manlift)		250	2	81	16%	76	70
Forklift -15000 Pounds		130	1	88	40%	84	78
Manlift – 40 Feet		49	3	75	40%	76	70
120-Foot Manlift		74	2	75	40%	74	68
Combined						87	81

PG&E Substation Modifications						
Equipment	Calculated sound level at 250 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	At nearest NR3, 250 feet (Leq dBA)
Pickup - 1/2 Ton	63	57	51	43	37	63
Pickup - 1 Ton	63	57	51	43	37	63
Welding Truck	59	53	47	39	33	59
Crane - 35 Ton (Manlift)	62	56	50	42	36	62
Forklift -15000 Pounds	70	64	58	50	44	70
Manlift – 40 Feet	62	56	50	42	36	62
120-Foot Manlift	60	54	48	40	34	60
Combined	73	67	61	53	47	73
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User’s Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhl.bts.gov/view/dot/8895 .						

East Staging Yard Establishment and Use						
Equipment	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at X50 feet (Leq dBA)	Calculated sound level at 100 feet (Leq dBA)
Water Truck (4000 Gal 300 HP)	300	1	72	40%	68	62
Loader (4-5 Yd 74 HP)	74	1	79	40%	75	69
Dump Truck (10-12 Yd 415 HP)	415	1	76	40%	72	66
Motor Grader (250 HP)	250	1	85	40%	81	75
Scrapper (410 HP)	410	1	84	40%	80	74
Vibratory Roller (157 HP)	157	1	80	20%	73	67
Pickup Truck (1/2-Ton 395 HP)	395	2	75	40%	74	68
Generator (36 HP)	36	2	81	50%	81	75
Forklift (15000 Lb Reach 130 HP)	130	2	88	20%	84	78
Pickup Truck (1-Ton 410 HP)	410	2	75	40%	74	68
844 Loader (417 HP)	417	1	79	40%	75	69
Semi-Truck (500 HP)1	500	2	74	40%	73	67
Combined					89	83

East Staging Yard Establishment and Use						
Equipment	Calculated sound level at 250 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	At nearest NR3, 290 feet (Leq dBA)
Water Truck (4000 Gal 300 HP)	54	48	42	34	28	54
Loader (4-5 Yd 74 HP)	61	55	49	41	35	61
Dump Truck (10-12 Yd 415 HP)	58	52	46	38	32	58
Motor Grader (250 HP)	67	61	55	47	41	67
Scrapper (410 HP)	66	60	54	46	40	66
Vibratory Roller (157 HP)	59	53	47	39	33	59
Pickup Truck (1/2-Ton 395 HP)	60	54	48	40	34	60
Generator (36 HP)	67	61	55	47	41	67
Forklift (15000 Lb Reach 130 HP)	70	64	58	50	44	70
Pickup Truck (1-Ton 410 HP)	60	54	48	40	34	60
844 Loader (417 HP)	61	55	49	41	35	61
Semi-Truck (500 HP)1	59	53	47	39	33	59
Combined	75	69	63	55	49	75
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhl.bts.gov/view/dot/8895 .						

West Staging Yard Establishment and Use						
Equipment	Horsepower	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at X50 feet (Leq dBA)	Calculated sound level at 100 feet (Leq dBA)
Water Truck (4000 Gal 300 HP)	300	1	72	40%	68	62
Loader (4-5 Yd 74 HP)	74	1	79	40%	75	69
Dump Truck (10-12 Yd 415 HP)	415	1	76	40%	72	66
Motor Grader (250 HP)	250	1	85	40%	81	75
Scraper (410 HP)	410	1	84	40%	80	74
Vibratory Roller (157 HP)	157	1	80	20%	73	67
Pickup Truck (1/2-Ton 395 HP)	395	2	75	40%	74	68
Generator (36 HP)	36	2	81	50%	81	75
Forklift (15000 Lb Reach 130 HP)	130	2	88	20%	84	78
Pickup Truck (1-Ton 410 HP)	410	2	75	40%	74	68
844 Loader (417 HP)	417	1	79	40%	75	69
Semi-Truck (500 HP)1	500	2	74	40%	73	67
Combined					89	83

West Staging Yard Establishment and Use						
Equipment	Calculated sound level at 250 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	At nearest NR3, 1520 feet (Leq dBA)
Water Truck (4000 Gal 300 HP)	54	48	42	34	28	38
Loader (4-5 Yd 74 HP)	61	55	49	41	35	45
Dump Truck (10-12 Yd 415 HP)	58	52	46	38	32	42
Motor Grader (250 HP)	67	61	55	47	41	51
Scrapper (410 HP)	66	60	54	46	40	50
Vibratory Roller (157 HP)	59	53	47	39	33	43
Pickup Truck (1/2-Ton 395 HP)	60	54	48	40	34	44
Generator (36 HP)	67	61	55	47	41	51
Forklift (15000 Lb Reach 130 HP)	70	64	58	50	44	54
Pickup Truck (1-Ton 410 HP)	60	54	48	40	34	44
844 Loader (417 HP)	61	55	49	41	35	45
Semi-Truck (500 HP)1	59	53	47	39	33	43
Combined	75	69	63	55	49	59
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhl.bts.gov/view/dot/8895 .						

Telecommunications Interconnection Lines							
Equipment Name	Anticipated Engine Output (horsepower)	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 10 feet (Leq dBA)	Calculated sound level at 20 feet (Leq dBA)	
Crane - 35 Ton (Manlift)	250	2	81	16%	90	84	
Forklift - 10000 Reach	130	1	88	20%	95	89	
Excavator - Mini	70	2	81	40%	94	88	
Truck - Dump 10-12 Yards	415	3	76	40%	91	85	
Skid steer loader	74	2	79	40%	92	86	
Trencher	75	1	80	50%	94	88	
Pickup - 1 Ton	410	3	75	40%	90	84	
Truck - Concrete	425	2	79	40%	89	83	
Wire Trailer/ Tensioner	175	1	85	50%	96	90	
Wire Puller	175	1	85	50%	96	90	
Combined					103	97	

Telecommunications Interconnection Lines						
Equipment Name	Calculated sound level at 50 feet (Leq dBA)	Calculated sound level at100 feet (Leq dBA)	Calculated sound level at 250 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)
Crane - 35 Ton (Manlift)	76	70	62	56	50	42
Forklift - 10000 Reach	81	75	67	61	55	47
Excavator - Mini	80	74	66	60	54	46
Truck - Dump 10-12 Yards	77	71	63	57	51	43
Skid steer loader	78	72	64	58	52	44
Trencher	80	74	66	60	54	46
Pickup - 1 Ton	76	70	62	56	50	42
Truck - Concrete	75	69	61	55	49	41
Wire Trailer/ Tensioner	82	76	68	62	56	48
Wire Puller	82	76	68	62	56	48
Combined	89	83	76	69	63	56

Telecommunications Interconnection Lines			
Equipment Name	Calculated sound level at 3000 feet (Leq dBA)	Calculated sound level at 3500 feet (Leq dBA)	Calculated sound level at NR3, 45 feet (Leq dBA)
Crane - 35 Ton (Manlift)	41	39	77
Forklift - 10000 Reach	46	44	82
Excavator - Mini	45	43	81
Truck - Dump 10-12 Yards	42	40	78
Skid steer loader	43	41	79
Trencher	45	43	81
Pickup - 1 Ton	41	39	77
Truck - Concrete	40	38	76
Wire Trailer/ Tensioner	47	45	83
Wire Puller	47	45	83
Combined	54	53	90
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC- FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhl.bts.gov/view/dot/8895 .			

Proposed Project sound Levels from LSPGC Telecommunication Interconnection Lines Construction							
	Calculated sound level at 20 feet (Leq dBA)	Calculated sound level at 100 feet (Leq dBA)	Calculated sound level at 250 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 3000 feet (Leq dBA)
Project -generated	97	83	76	69	63	56	54
Existing ambient	42	42	42	42	42	42	42
Combined project- generated and existing ambient	97	83	76	69	63	56	54
Change in existing ambient sound levels	55	41	34	27	21	14	12
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhl.bts.gov/view/dot/8895 .							

500 kV Transposition Structures – Foundation Installation						
Equipment Name	Anticipated Engine Output (horsepower)	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 50 feet (Leq dBA)	Calculated sound level at 100 feet (Leq dBA)
Pressure Digger - Lo-Drill (Tracked)	275	1	84	20%	77	71
Truck - Concrete	425	2	79	40%	78	72
Pickup - 1 Ton	410	2	75	40%	74	68
Truck - Water 4 K	300	1	72	40%	68	62
Truck - Dump 10-12 Yd	415	1	76	40%	72	66
Skid steer loader	74	1	85	40%	75	69
Crane - 35 Ton (Manlift)	250	1	81	16%	73	67
Excavator	250	1	81	40%	77	71
Combined					84	78

500 kV Transposition Structures – Foundation Installation						
Equipment Name	Calculated sound level at 250 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at NR4 1000 feet (Leq dBA)	Calculated sound level at NR5 900 feet (Leq dBA)
Pressure Digger - Lo-Drill (Tracked)	63	57	51	43	51	52
Truck - Concrete	64	58	52	44	52	53
Pickup - 1 Ton	60	54	48	40	48	49
Truck - Water 4 K	54	48	42	34	42	43
Truck - Dump 10-12 Yd	58	52	46	38	46	47
Skid steer loader	61	55	49	41	49	50
Crane - 35 Ton (Manlift)	59	53	47	39	47	48
Excavator	63	57	51	43	51	52
Combined	70	64	58	50	58	59

500 kV Transposition Structures – Foundation Installation		
Equipment Name	Calculated sound level at NR6 1100 feet (Leq dBA)	Calculated sound level at NR7 345 feet (Leq dBA)
Pressure Digger - Lo-Drill (Tracked)	50	60
Truck - Concrete	51	61
Pickup - 1 Ton	47	57
Truck - Water 4 K	41	51
Truck - Dump 10-12 Yd	45	55
Skid steer loader	48	58
Crane - 35 Ton (Manlift)	46	56
Excavator	50	60
Combined	57	67
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of		

500 kV Transposition Structures – Structure and Conductor Installation inclusive of helicopter use						
Equipment Name	Anticipated Engine Output (horsepower)	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 50 feet (Leq dBA)	Calculated sound level at 100 feet (Leq dBA)
Crane - 35 Ton (Manlift)	250	1	81	16%	73	67
Pickup - 1/2 ton	395	4	75	40%	77	71
Pickup - 1 ton	410	4	75	40%	77	71
Crane - 200 Ton	275	1	81	16%	73	67
D8 Sag Dozer	200	1	82	40%	78	72
Truck - Water 4 K	300	1	72	40%	68	62
Wire Puller	175	1	85	50%	82	76
Wire Trailer/ Tensioner	175	1	85	50%	82	76
Helicopter (light duty)	700	1	101	50%	98	92
Jet fuel truck	300	1	72	40%	68	62
Combined					98	92

500 kV Transposition Structures – Structure and Conductor Installation inclusive of helicopter use						
Equipment Name	Calculated sound level at 250 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at NR4 1000 feet (Leq dBA)	Calculated sound level at NR5 900 feet (Leq dBA)
Crane - 35 Ton (Manlift)	59	53	47	39	47	48
Pickup - 1/2 ton	63	57	51	43	51	52
Pickup - 1 ton	63	57	51	43	51	52
Crane - 200 Ton	59	53	47	39	47	48
D8 Sag Dozer	64	58	52	44	52	53
Truck - Water 4 K	54	48	42	34	42	43
Wire Puller	68	62	56	48	56	57
Wire Trailer/ Tensioner	68	62	56	48	56	57
Helicopter (light duty)	76	78	76	76	72	73
Jet fuel truck	65	48	65	65	42	43
Combined	78	78	77	76	72	73

500 kV Transposition Structures – Structure and Conductor Installation inclusive of helicopter use		
Equipment Name	Calculated sound level at NR6 1100 feet (Leq dBA)	Calculated sound level at NR7 345 feet (Leq dBA)
Crane - 35 Ton (Manlift)	46	56
Pickup - 1/2 ton	50	60
Pickup - 1 ton	50	60
Crane - 200 Ton	46	56
D8 Sag Dozer	51	61
Truck - Water 4 K	41	51
Wire Puller	55	65
Wire Trailer/ Tensioner	55	65
Helicopter (light duty)	71	81
Jet fuel truck	41	51
Combined	72	82
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of		

500 kV Transposition Structures – Structure and Conductor Installation ground-based work only						
Equipment Name	Anticipated Engine Output (horsepower)	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at 50 feet (Leq dBA)	Calculated sound level at 100 feet (Leq dBA)
					50	100
Crane - 35 Ton (Manlift)	250	1	81	16%	73	67
Pickup - 1/2 ton	395	4	75	40%	77	71
Pickup - 1 ton	410	4	75	40%	77	71
Crane - 200 Ton	275	1	81	16%	73	67
D8 Sag Dozer	200	1	82	40%	78	72
Truck - Water 4 K	300	1	72	40%	68	62
Wire Puller	175	1	85	50%	82	76
Wire Trailer/ Tensioner	175	1	85	50%	82	76
Jet fuel truck	300	1	72	40%	68	62
Combined					87	81

500 kV Transposition Structures – Structure and Conductor Installation ground-based work only						
Equipment Name	Calculated sound level at 250 feet (Leq dBA)	Calculated sound level at 500 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at NR4 1000 feet (Leq dBA)	Calculated sound level at NR5 900 feet (Leq dBA)
	250	500	1000	2500	1000	900
Crane - 35 Ton (Manlift)	59	53	47	39	47	48
Pickup - 1/2 ton	63	57	51	43	51	52
Pickup - 1 ton	63	57	51	43	51	52
Crane - 200 Ton	59	53	47	39	47	48
D8 Sag Dozer	64	58	52	44	52	53
Truck - Water 4 K	54	48	42	34	42	43
Wire Puller	68	62	56	48	56	57
Wire Trailer/ Tensioner	68	62	56	48	56	57
Jet fuel truck	65	48	65	65	42	43
Combined	74	67	67	65	61	62

500 kV Transposition Structures – Structure and Conductor Installation ground-based work only		
	Calculated sound level at NR6 1100 feet (Leq dBA)	Calculated sound level at NR7 345 feet (Leq dBA)
Equipment Name		
	1100	345
Crane - 35 Ton (Manlift)	46	56
Pickup - 1/2 ton	50	60
Pickup - 1 ton	50	60
Crane - 200 Ton	46	56
D8 Sag Dozer	51	61
Truck - Water 4 K	41	51
Wire Puller	55	65
Wire Trailer/ Tensioner	55	65
Jet fuel truck	41	51
Combined	61	71
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of		

LSPGC 230 kV Underground Segment – Substation Getaways						
Equipment Name	Anticipated Engine Output (horsepower)	Estimated number of units	FHWA RCNM Construction Equipment Lmax at 50 Feet (dBA)	Usage Factor (%)	Calculated sound level at distance 50 feet (Leq dBA)	Calculated sound level at 100 feet (Leq dBA)
Pickup - 1 Ton	410	4	75	40%	75	69
Welding Truck	395	2	74	40%	74	68
Generator – 25 kW	36	2	81	50%	81	75
Crane - 35 Ton (Manlift)	250	2	81	16%	81	75
Forklift - 10,000 Reach	130	2	79	40%	88	82
Forklift -15,000 Pounds	130	1	79	40%	88	82
Loader - 4-5 Yards	74	2	80	40%	79	73
Wire Trailer/ Tensioner	175	1	85	50%	85	79
Wire Puller	175	1	85	50%	85	79
Skid steer loader	74	2	85	40%	79	73
Backhoe - 2X4	68	2	80	40%	78	72
Combined					94	88

LSPGC 230 kV Underground Segment – Substation Getaways						
Equipment Name	Calculated sound level at 500 feet (Leq dBA)	Calculated sound level at 1000 feet (Leq dBA)	Calculated sound level at 1500 feet (Leq dBA)	Calculated sound level at 2500 feet (Leq dBA)	Calculated sound level at 5000 feet (Leq dBA)	Calculated sound level at NR1, 3460 feet (Leq dBA)
Pickup - 1 Ton	55	49	46	41	35	38
Welding Truck	54	48	45	40	34	37
Generator – 25 kW	61	55	52	47	41	44
Crane - 35 Ton (Manlift)	61	55	52	47	41	44
Forklift - 10,000 Reach	68	62	59	54	48	51
Forklift -15,000 Pounds	68	62	59	54	48	51
Loader - 4-5 Yards	59	53	50	45	39	42
Wire Trailer/ Tensioner	65	59	56	51	45	48
Wire Puller	65	59	56	51	45	48
Skid steer loader	59	53	50	45	39	42
Backhoe - 2X4	58	52	49	44	38	41
Combined	74	68	64	60	54	57

LSPGC 230 kV Underground Segment – Substation Getaways			
Equipment Name	Calculated sound level at		
	Calculated sound level at NR2, 4010 feet (Leq dBA)	NR2a1, 8300 feet (Leq dBA)	Calculated sound level at NR6, 21000 feet (Leq dBA)
Pickup - 1 Ton	37	31	23
Welding Truck	36	30	22
Generator – 25 kW	43	37	29
Crane - 35 Ton (Manlift)	43	37	29
Forklift - 10,000 Reach	50	44	36
Forklift -15,000 Pounds	50	44	36
Loader - 4-5 Yards	41	35	27
Wire Trailer/ Tensioner	47	41	33
Wire Puller	47	41	33
Skid steer loader	41	35	27
Backhoe - 2X4	40	34	26
Combined	56	49	41
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User’s Guide. Final Report DOT-VNTSC- FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.ntl.bts.gov/view/dot/8895 .			

Alternative 5 230 kV submarine segment site prep equipment list						
Construction equipment	Analog Equipment	Noise level (dB, Lmax at 50 feet)	Number	Hours of Use	Hours of Use Daytime	Days of Use
Anchor Winches	Portable Generator	85	2	12	12	10
Crane	Truck Crane	81	1	5	5	10
Barge Tug	Tugboat / Large Engine Vessel	87	1	11	11	10
Small Boats	Small Outboard Motorboat	85	2	16	12	10
Anchor Tug	Tugboat	87	1	22	12	10
Comnbined						

Alternative 5 230 kV submarine segment site prep equipment list				
Construction equipment	Usage factor	Calculated sound level at distance 50 feet (Leq dBA)	Calculated sound level at distance 1000 feet (Leq dBA)	Calculated sound level at distance at NR3, 2400 feet (Leq dBA)
Anchor Winches	100%	99	73	39
Crane	100%	88	73	39
Barge Tug	100%	97	73	39
Small Boats	75%	98	73	39
Anchor Tug	55%	95	73	39
Comnbined		104	80	46
Source: Federal Highway Administration (FHWA). 2006. FHWA Roadway Construction sound Model Version 1.0: User's Guide. Final Report DOT-VNTSC-FHWA-05-01; FHWA-HEP-05-054. Prepared for U.S. Department of Transportation Federal Highway Administration Office of Natural and Human Environment Washington DC 20590. https://rosap.nhtl.bts.gov/view/dot/8895 .				

Proposed Project Activities sound Levels at NR1						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site development	5/1/2026	8/1/2026	3545	55		
Collinsville Substation: Below-grade	7/14/2026	1/14/2027	3545	57		
Collinsville Substation: abovegrade	1/2/2027	2/11/2028	3545	53		
230 kV overhead: access road	5/1/2027	5/19/2027	4500	46		
230 kV overhead:structure foundation installation	5/20/2027	6/15/2027	4500	49		
230 kV overhead:structure installation	5/20/2027	6/15/2027	4500	45		
230 kV Conductor installation (with helicopter)	7/16/2027	8/15/2027	4500	59		
230 kV Conductor installation (without helicopter)	7/16/2027	8/15/2027	4500	50		
Submarine cable	7/1/27	10/31/27	2750	63		10
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	3545	51		
Northern Transition Approach	6/15/27	11/30/27	2750	46		10
500 kV interconnection: structure foundation installation	6/1/27	7/28/27	4400	51		
500 kV interconnection: structure installation (with helicopter)	7/29/27	9/23/27	4025	66		
500 kV interconnection: structure installation (without helicopter)	9/24/27	11/19/27	4025	46		
500 kV interconnection:conductor installation (with helicopter)	7/29/27	9/23/27	4025	60		
500 kV interconnection:conductor installation (without helicopter)	9/24/27	9/24/27	4025	48		
12 kV distribution	6/1/26	8/1/26	2351	57		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	3545	50		

Proposed Project Activities sound Levels at NR1			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	55	48	56
Collinsville Substation: Below-grade	57	48	57
Collinsville Substation: abovegrade	53	48	54
230 kV overhead: access road	46	48	50
230 kV overhead:structure foundation installation	49	48	51
230 kV overhead:structure installation	45	48	50
230 kV Conductor installation (with helicopter)	59	48	60
230 kV Conductor installation (without helicopter)	50	48	52
Submarine cable	53	48	54
Collinsville Substation: Site and ROW restoration	51	48	53
Northern Transition Approach	36	48	48
500 kV interconnection: structure foundation installation	51	48	53
500 kV interconnection: structure installation (with helicopter)	66	48	66
500 kV interconnection: structure installation (without helicopter)	46	48	50
500 kV interconnection:conductor installation (with helicopter)	60	48	60
500 kV interconnection:conductor installation (without helicopter)	48	48	51
12 kV distribution	57	48	57
PG&E IT Work at Collinsville Substation	50	48	52

Proposed Project Activities sound Levels at NR1 with MM NOI-2						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site development	5/1/2026	8/1/2026	3545	55	10	
Collinsville Substation: Below-grade	7/14/2026	1/14/2027	3545	55	10	
Collinsville Substation: abovegrade	1/2/2027	2/11/2028	3545	55	10	
230 kV overhead: access road	5/1/2027	5/19/2027	4500	46		
230 kV overhead:structure foundation installation	5/20/2027	6/15/2027	4500	49		
230 kV overhead:structure installation	5/20/2027	6/15/2027	4500	45		
230 kV Conductor installation (with helicopter)	7/16/2027	8/15/2027	4500	60		
230 kV Conductor installation (without helicopter)	7/16/2027	8/15/2027	4500	54		
Submarine cable	7/1/27	10/31/27	2750	63	10	
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	3545	51		
Northern Transition Approach	6/15/27	11/30/27	2750	46	10	
500 kV interconnection: structure foundation installation	6/1/27	7/28/27	4400	51		
500 kV interconnection: structure installation (with helicopter)	7/29/27	9/23/27	4025	66		
500 kV interconnection: structure installation (without helicopter)	9/24/27	11/19/27	4025	46		
500 kV interconnection:conductor installation (with helicopter)	7/29/27	9/23/27	4025	60		
500 kV interconnection:conductor installation (without helicopter)	9/24/27	9/24/27	4025	48		
12 kV distribution	6/1/26	8/1/26	2351	57		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	3545	47	10	

Proposed Project Activities sound Levels at NR1 with MM NOI-2			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site developent	45	48	50
Colinsville Substation: Below-grade	45	48	50
Collinsvile Substation: abovegrade	45	48	50
230 kV overhead: access road	46	48	50
230 kV overhead:structure foundation installation	49	48	51
230 kV overhead:structure installation	45	48	50
230 kV Conductor installation (with helicopter)	60	48	60
230 kV Conductor installation (without helicopter)	54	48	55
Submarine cable	53	48	54
Collinsville Substation: Site and ROW restoration	51	48	48
Northern Transition Approach	36	48	48
500 kV interconnection: structure foundation installation	51	48	53
500 kV interconnection: structure installation (with helicopter)	66	48	66
500 kV interconnection: structure installation (without helicopter)	46	48	50
500 kV interconnection:conductor installation (with helicopter)	60	48	60
500 kV interconnection:conductor installation (without helicopter)	48	48	51
12 kV distribution	57	48	57
PG&E IT Work at Collinsville Substation	37	48	48

Proposed Project Activities sound Levels at NR2						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site development	5/1/2026	8/1/2026	3787	55		
Collinsville Substation: Below-grade	7/14/2026	1/14/2027	3787	56		
Collinsville Substation: abovegrade	1/2/2027	2/11/2028	3787	56		
230 kV overhead: access road	5/1/2027	5/19/2027	4107	47		
230 kV overhead:structure foundation installation	5/20/2027	6/15/2027	4107	50		
230 kV overhead:structure installation	5/20/2027	6/15/2027	4107	46		
230 kV Conductor installation (with helicopter)	7/16/2027	8/15/2027	4107	60		
23 kV Conductor installation (without helicopter)	7/16/2027	8/15/2027	4107	50		
Submarine cable	7/1/27	10/31/27	3965	60		10
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	3787	50		
Northern Transition Approach	6/15/27	11/30/27	3965	48		10
500 kV interconnection: structure foundation installation	6/1/26	8/1/26	5500	51		
500 kV interconnection: structure installation (with helicopter)	1/18/28	2/29/28	4070	66		
500 kV interconnection: structure installation (without helicopter)	1/18/28	2/29/28	4070	46		
500 kV interconnection:conductor installation (with helicopter)	1/18/28	2/29/28	4070	60		
500 kV interconnection:conductor installation (without helicopter)	1/18/28	2/29/28	4070	48		
12 kV distribution	6/1/26	8/1/26	1331	62		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	3787	50		

Proposed Project Activities sound Levels at NR2			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	55	48	56
Collinsville Substation: Below-grade	56	48	57
Collinsville Substation: abovegrade	56	48	57
230 kV overhead: access road	47	48	
230 kV overhead:structure foundation installation	50	48	52
230 kV overhead:structure installation	46	48	50
230 kV Conductor installation (with helicopter)	60	48	60
23 kV Conductor installation (without helicopter)	50	48	52
Submarine cable	50	48	52
Collinsville Substation: Site and ROW restoration	50	48	52
Northern Transition Approach	38	48	48
500 kV interconnection: structure foundation installation	51	48	53
500 kV interconnection: structure installation (with helicopter)	66	48	66
500 kV interconnection: structure installation (without helicopter)	46	48	50
500 kV interconnection:conductor installation (with helicopter)	60	48	60
500 kV interconnection:conductor installation (without helicopter)	48	48	51
12 kV distribution	62	48	62
PG&E IT Work at Collinsville Substation	50	48	52

Proposed Project Activities sound Levels at NR2 with MM NOI-2						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site developent	5/1/2026	8/1/2026	3787	55	10	
Colinsville Substation: Below-grade	7/14/2026	1/14/2027	3787	55	10	
Collinsville Substation: abovegrade	1/2/2027	2/11/2028	3787	55	10	
230 kV overhead: access road	5/1/2027	5/19/2027	4107	47		
230 kV overhead:structure foundation installation	5/20/2027	6/15/2027	4107	50		
230 kV overhead:structure installation	5/20/2027	6/15/2027	4107	46		
230 kV Conductor installation (with helicopter)	7/16/2027	8/15/2027	4107	61		
23 kV Conductor installation (without helicopter)	7/16/2027	8/15/2027	4107	55		
Submarine cable	7/1/27	10/31/27	3965	60	10	
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	3787	50		
Northern Transition Approach	6/15/27	11/30/27	3965	48	10	
500 kV interconnection: structure foundation installation	6/1/26	8/1/26	5500	51		
500 kV interconnection: structure installation (with helicopter)	1/18/28	2/29/28	4070	66		
500 kV interconnection: structure installation (without helicopter)	1/18/28	2/29/28	4070	46		
500 kV interconnection:conductor installation (with helicopter)	1/18/28	2/29/28	4070	60		
500 kV interconnection:conductor installation (without helicopter)	1/18/28	2/29/28	4070	48		
12 kV distribution	6/1/26	8/1/26	1331	62		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	3787	50	10	

Proposed Project Activities sound Levels at NR2 with MM NOI-2			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	45	48	50
Collinsville Substation: Below-grade	45	48	50
Collinsville Substation: abovegrade	45	48	50
230 kV overhead: access road	47	48	
230 kV overhead:structure foundation installation	50	48	52
230 kV overhead:structure installation	46	48	50
230 kV Conductor installation (with helicopter)	61	48	61
23 kV Conductor installation (without helicopter)	55	48	56
Submarine cable	50	48	52
Collinsville Substation: Site and ROW restoration	50	48	52
Northern Transition Approach	38	48	48
500 kV interconnection: structure foundation installation	51	48	53
500 kV interconnection: structure installation (with helicopter)	66	48	66
500 kV interconnection: structure installation (without helicopter)	46	48	50
500 kV interconnection:conductor installation (with helicopter)	60	48	60
500 kV interconnection:conductor installation (without helicopter)	48	48	51
12 kV distribution	62	48	62
PG&E IT Work at Collinsville Substation	50	48	52

Proposed Project Activities sound Levels at NR3						
Component and activity	Start date	End date	Distance to Component	Project sound (Leq dBA)	Insertion loss (dBA)	
230 kV submarine segment cable installation	7/1/27	10/31/27	2400	64	10	
230 kV submarine southern transition approach	6/15/27	11/30/27	2400	61	10	
230 kV underground segment	6/1/27	8/23/27	1900	60	10	
Telcommunications interconnction lines	6/1/27	10/1/27	45	90	10	
Pittsburg Substation Upgrades	5/1/27	5/31/28	250	70	10	
Pittsburg Substation staging yard east preparation and use	5/1/27	5/31/28	290	72	10	
Pittsburg Substation staging yard west preparation and use	5/1/27	5/31/28	290	56	10	
Alt 5 230 kV Submarine segment site preparation	9/15/26	9/30/26	2400	46	10	

Proposed Project Activities sound Levels at NR3			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
230 kV submarine segment cable installation	54	46	55
230 kV submarine southern transition approach	51	46	52
230 kV underground segment	50	46	52
Telcommunications interconnection lines	80	46	80
Pittsburg Substation Upgrades	60	46	60
Pittsburg Substation staging yard east preparation and use	62	46	62
Pittsburg Substation staging yard west preparation and use	46	46	49
Alt 5 230 kV Submarine segment site preparation	36	47	47

Proposed Project Activities at NR4, NR5, and NR6						
Component and activity	Start date	End date	Distance to component (feet)	Work days	Project sound (Leq dBA)	
Transposition site A: foundation installation	6/1/27	7/28/27	1,000	48	58	
Transposition site A: structure and conductor installation (inclusive of helicopters)	1/18/28	2/29/28	1,000	36	72	
Transposition site A: structure and conductor installation (exclusive of helicopters)	1/18/28	2/29/28	1,000	36	61	
Transposition site B: foundation installation	6/1/27	7/28/27	900	48	59	
Transposition site B: structure and conductor installation (inclusive of helicopters)	1/18/28	2/29/28	900	36	73	
Transposition site B : structure and conductor installation (exclusive of helicopters)	1/18/28	2/29/28	900	36	73	
Transposition site C: foundation installation	6/1/27	7/28/27	1100	48	57	
Transposition site C: structure and conductor installation (inclusive of helicopters)	1/18/28	2/29/28	1100	36	72	
Transposition site C: structure and conductor installation (exclusive of helicopters)	1/18/28	2/29/28	1100	36	61	
Transposition site D: foundation installation	6/1/27	7/28/27	345	48	67	
Transposition site D: structure and conductor installation (inclusive of helicopters)	1/18/28	2/29/28	345	36	82	
Transposition site D: structure and conductor installation (exclusive of helicopters)	1/18/28	2/29/28	345	36	71	

Proposed Project Activities at NR4, NR5, and NR6		
Component and activity	Existing ambient daytime sound levels (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Transposition site A: foundation installation	30	58
Transposition site A: structure and conductor installation (inclusive of helicopters)	30	72
Transposition site A: structure and conductor installation (exclusive of helicopters)	30	61
Transposition site B: foundation installation	30	59
Transposition site B: structure and conductor installation (inclusive of helicopters)	30	73
Transposition site B : structure and conductor installation (exclusive of helicopters)	30	73
Transposition site C: foundation installation	30	57
Transposition site C: structure and conductor installation (inclusive of helicopters)	30	72
Transposition site C: structure and conductor installation (exclusive of helicopters)	30	61
Transposition site D: foundation installation	30	67
Transposition site D: structure and conductor installation (inclusive of helicopters)	30	82
Transposition site D: structure and conductor installation (exclusive of helicopters)	30	71

Proposed Project Overlapping Construction Activities sound Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026		26	48
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/13/2026		37	48
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	7/14/2026	7/31/2026		16	48
Collinsville Substation: Below-grade	8/1/2026	12/31/2026		132	48
Collinsville Substation: Below-grade	1/1/2027	1/1/2027		1	48
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	1/2/2027	1/13/2027		10	48
Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	1/14/2027	4/30/2027		92	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + Collinsville Substation PG&E IT Work	5/1/2027	5/18/2027		15	48
Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	5/19/2027	5/19/2027		1	48
Collinsville Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation + Collinsville Substation PG&E IT Work	5/20/2027	5/31/2027		10	48

Proposed Project Overlapping Construction Activities sound Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	56
Collinsville Substation: Site development + 12 kV distribution	59
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	61
Collinsville Substation: Below-grade	57
Collinsville Substation: Below-grade	58
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	59
Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	56
Collinsville Substation: abovegrade + 230 kV overhead: access road + Collinsville Substation PG&E IT Work	56
Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	56
Collinsville Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation + Collinsville Substation PG&E IT Work	57

Proposed Project Overlapping Construction Activities sound Levels at NR1

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation; 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	6/1/2027	6/14/2027	12	58	48
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	6/15/2027	6/30/2027	14	57	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	7/1/2027	7/15/2027	13	58	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	7/16/2027	7/27/2027	10	61	48
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	7/28/2027	7/28/2027	1	61	48

Proposed Project Overlapping Construction Activities sound Levels at NR1

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation; 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	58
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	57
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	59
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	61
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	62

Proposed Project Overlapping Construction Activities sound Levels at NR1

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter); 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	7/29/2027	8/14/2027	15	68	48
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	8/15/2027	8/31/2027	14	67	48
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter)	9/1/2027	9/22/2027	19	67	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach	9/23/2027	9/23/2027	1	56	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	9/24/2027	10/30/2027	32	61	48

Proposed Project Overlapping Construction Activities sound Levels at NR1

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter); 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	68
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	67
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter)	67
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach	57
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	61

Proposed Project Overlapping Construction Activities sound Levels at NR2

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	10/31/2027	11/18/2027	16	60	48
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach	11/19/2027	11/29/2027	9	54	48
Collinsvile Substation: abovegrade	11/30/2027	1/31/2028	54	53	48
Collinsvile Substation: abovegrade; Collinsville Substation: Site and ROW restoration	2/1/2028	7/17/2028	144	55	48

Proposed Project Overlapping Construction Activities sound Levels at NR2

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	60
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach	55
Collinsvile Substation: abovegrade	54
Collinsvile Substation: abovegrade; Collinsville Substation: Site and ROW restoration	56

Proposed Project Overlapping Construction Activities sound Levels at NR1	
Min sound level	54
Max sound level	68
Project days	694
Days above 55 dBA	631
Percentage of days above 55 dBA	91%

Proposed Project Overlapping Construction Activities sound Levels at NR2					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026		26	48
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/13/2026		37	48
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	7/14/2026	7/31/2026		16	48
Collinsville Substation: Below-grade	8/1/2026	12/31/2026		132	48
Collinsville Substation: Below-grade	1/1/2027	1/1/2027		1	48
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	1/2/2027	1/13/2027		10	48
Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	1/14/2027	4/30/2027		92	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + Collinsville Substation PG&E IT Work	5/1/2027	5/18/2027		15	48
Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	5/19/2027	5/19/2027		1	48
Collinsville Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation + Collinsville Substation PG&E IT Work	5/20/2027	5/31/2027		10	48
Collinsville Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation; 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	6/1/2027	6/14/2027		12	48

Proposed Project Overlapping Construction Activities sound Levels at NR2	
Overlapping constuction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	56
Collinsville Substation: Site development + 12 kV distribution	63
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	64
Collinsville Substation: Below-grade	57
Collinsville Substation: Below-grade	58
Collinsville Substation: Below-grade + Collinsvile Substation: abovegrade + Collinsville Substation PG&E IT Work	60
Collinsvile Substation: abovegrade + Collinsville Substation PG&E IT Work	58
Collinsvile Substation: abovegrade + 230 kV overhead: access road + Collinsville Substation PG&E IT Work	58
Collinsvile Substation: abovegrade + Collinsville Substation PG&E IT Work	58
Collinsvile Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation + Collinsville Substation PG&E IT Work	58
Collinsvile Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation; 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	59

Proposed Project Overlapping Construction Activities sound Levels at NR2

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	6/15/2027	6/30/2027	14	58	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	7/1/2027	7/15/2027	13	59	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	7/16/2027	7/27/2027	10	62	48
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	7/28/2027	7/28/2027	1	62	48
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter); 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection: conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	7/29/2027	8/14/2027	15	68	48

Proposed Project Overlapping Construction Activities sound Levels at NR2

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	58
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	59
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	62
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	62
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter); 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection: conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	68

Proposed Project Overlapping Construction Activities sound Levels at NR2

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	8/15/2027	8/31/2027		14	67	48
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter)	9/1/2027	9/22/2027		19	67	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach	9/23/2027	9/23/2027		1	57	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	9/24/2027	10/30/2027		32	61	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	10/31/2027	11/18/2027		16	60	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach	11/19/2027	11/29/2027		9	57	48
Collinsville Substation: abovegrade	11/30/2027	1/31/2028		54	56	48

Proposed Project Overlapping Construction Activities sound Levels at NR2

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	67
Collinsvile Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter)	67
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach	58
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	62
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	60
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach	57
Collinsvile Substation: abovegrade	57

Proposed Project Overlapping Construction Activities sound Levels at NR2

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade; Collinsville Substation: Site and ROW restoration	2/1/2028	7/17/2028	144	57	48

Proposed Project Overlapping Construction Activities sound Levels at NR2

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade; Collinsville Substation: Site and ROW restoration	58

Proposed Project Overlapping Construction Activities sound Levels at NR2	
Min sound level	56
Max sound level	68
Project days	694
Days above 55 dBA	694
Percentage of days above DBA	100%

Proposed Project Overlapping Construction Activities sound Levels at NR3					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west	5/1/27	6/1/27	27	57	46
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west, 230 kV underground	6/1/27	6/15/27	12	80	46
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west, 230 kV underground , 230 kV Southern transition approach	6/15/27	7/1/27	14	81	46
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west, 230 kV underground , 230 kV Submarine cable installation, 230 kV Southern transition approach	7/1/27	8/23/27	45	81	46
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west, 230 kV Submarine cable installation, 230 kV Southern transition approach	8/23/27	10/31/27	59	65	46
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west, 230 kV Southern transition approach	10/31/27	11/30/27	26	63	46

Proposed Project Overlapping Construction Activities sound Levels at NR3	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west	57
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west, 230 kV underground	80
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west, 230 kV underground , 230 kV Southern transition approach	81
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west, 230 kV underground , 230 kV Submarine cable installation, 230 kV Southern transition approach	81
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west, 230 kV Submarine cable installation, 230 kV Southern transition approach	65
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west, 230 kV Southern transition approach	63

Proposed Project Overlapping Construction Activities sound Levels at NR3

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west	11/30/27	5/31/28	158	57	46

Proposed Project Overlapping Construction Activities sound Levels at NR3

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Pittsburg Substation Upgrades, Pittsburg Substation staging yard east, Pittsburg Substation staging yard west	57

Proposed Project Overlapping Construction Activities sound Levels at NR3	
Minimum sound level	57
Maximum sound level	81
Average sound level	77
Days over 65 dBA	71
Percent days over	21%

Proposed Project Overlapping Construction Activities sound Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq	Existing daytime ambient
				dBA)	sound level (NM2) (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026		26	48
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/13/2026		37	48
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	7/14/2026	7/31/2026		16	48
Collinsville Substation: Below-grade	8/1/2026	12/31/2026		132	48
Collinsville Substation: Below-grade	1/1/2027	1/1/2027		1	48
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	1/2/2027	1/13/2027		10	48
Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	1/14/2027	4/30/2027		92	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + Collinsville Substation PG&E IT Work	5/1/2027	5/18/2027		15	48
Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	5/19/2027	5/19/2027		1	48
Collinsville Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation + Collinsville Substation PG&E IT Work	5/20/2027	5/31/2027		10	48
Collinsville Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation; 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	6/1/2027	6/14/2027		12	48

Proposed Project Overlapping Construction Activities sound Levels at NR1 with MM NOI-1	
Overlapping constuction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	50
Collinsville Substation: Site development + 12 kV distribution	58
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	58
Collinsville Substation: Below-grade	50
Collinsville Substation: Below-grade	50
Collinsville Substation: Below-grade + Collinsvile Substation: abovegrade + Collinsville Substation PG&E IT Work	51
Collinsvile Substation: abovegrade + Collinsville Substation PG&E IT Work	50
Collinsvile Substation: abovegrade + 230 kV overhead: access road + Collinsville Substation PG&E IT Work	52
Collinsvile Substation: abovegrade + Collinsville Substation PG&E IT Work	50
Collinsvile Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation + Collinsville Substation PG&E IT Work	53
Collinsvile Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation; 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	55

Proposed Project Overlapping Construction Activities sound Levels at NR1 with MM NOI-1

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	6/15/2027	6/30/2027	14	52	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	7/1/2027	7/15/2027	13	56	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	7/16/2027	7/27/2027	10	61	48
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	7/28/2027	7/28/2027	1	61	48
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter); 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	7/29/2027	8/14/2027	15	68	48

Proposed Project Overlapping Construction Activities sound Levels at NR1 with MM NOI-1

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	54
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	57
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	61
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	61
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter); 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection: conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	68

Proposed Project Overlapping Construction Activities sound Levels at NR1 with MM NOI-1

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	8/15/2027	8/31/2027		14	67	48
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter)	9/1/2027	9/22/2027		19	67	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach	9/23/2027	9/23/2027		1	54	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	9/24/2027	10/30/2027		32	60	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	10/31/2027	11/18/2027		16	60	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach	11/19/2027	11/29/2027		9	49	48
Collinsville Substation: abovegrade	11/30/2027	1/31/2028		54	45	48

Proposed Project Overlapping Construction Activities sound Levels at NR1 with MM NOI-1

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	67
Collinsvile Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter)	67
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach	55
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	61
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	60
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach	51
Collinsvile Substation: abovegrade	50

Proposed Project Overlapping Construction Activities sound Levels at NR1 with MM NOI-1

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade; Collinsville Substation: Site and ROW restoration	2/1/2028	7/17/2028	144	45	48

Proposed Project Overlapping Construction Activities sound Levels at NR1 with MM NOI-1

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade; Collinsville Substation: Site and ROW restoration	50

Proposed Project Overlapping Construction Activities sound Levels at NR1 with MM NOI-1	
Max sound level	68
Project days	694
Days above 55 dBA	173
Percentage of days above DBA	25%

Proposed Project Overlapping Construction Activities sound Levels at NR2 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq	Existing daytime ambient
				dBA)	sound level (NM2) (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026		26	48
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/13/2026		37	48
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	7/14/2026	7/31/2026		16	48
Collinsville Substation: Below-grade	8/1/2026	12/31/2026		132	48
Collinsville Substation: Below-grade	1/1/2027	1/1/2027		1	48
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	1/2/2027	1/13/2027		10	48
Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	1/14/2027	4/30/2027		92	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + Collinsville Substation PG&E IT Work	5/1/2027	5/18/2027		15	48
Collinsville Substation: abovegrade + Collinsville Substation PG&E IT Work	5/19/2027	5/19/2027		1	48
Collinsville Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation + Collinsville Substation PG&E IT Work	5/20/2027	5/31/2027		10	48
Collinsville Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation; 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	6/1/2027	6/14/2027		12	48

Proposed Project Overlapping Construction Activities sound Levels at NR2 with MM NOI-1	
Overlapping constuction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	50
Collinsville Substation: Site development + 12 kV distribution	62
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	62
Collinsville Substation: Below-grade	50
Collinsville Substation: Below-grade	53
Collinsville Substation: Below-grade + Collinsvile Substation: abovegrade + Collinsville Substation PG&E IT Work	54
Collinsvile Substation: abovegrade + Collinsville Substation PG&E IT Work	53
Collinsvile Substation: abovegrade + 230 kV overhead: access road + Collinsville Substation PG&E IT Work	54
Collinsvile Substation: abovegrade + Collinsville Substation PG&E IT Work	53
Collinsvile Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation + Collinsville Substation PG&E IT Work	55
Collinsvile Substation: abovegrade; 230 kV overhead:structure foundation installation; 230 kV overhead:structure installation; 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	57

Proposed Project Overlapping Construction Activities sound Levels at NR2 with MM NOI-1

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	6/15/2027	6/30/2027	14	54	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	7/1/2027	7/15/2027	13	56	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	7/16/2027	7/27/2027	10	62	48
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	7/28/2027	7/28/2027	1	62	48
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter); 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	7/29/2027	8/14/2027	15	68	48

Proposed Project Overlapping Construction Activities sound Levels at NR2 with MM NOI-1

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	55
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	56
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + Collinsville Substation PG&E IT Work	62
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	62
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 230 kV Conductor installation (with helicopter); 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection: conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	68

Proposed Project Overlapping Construction Activities sound Levels at NR2 with MM NOI-1

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	8/15/2027	8/31/2027		14	67	48
Collinsville Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter)	9/1/2027	9/22/2027		19	67	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach	9/23/2027	9/23/2027		1	51	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	9/24/2027	10/30/2027		32	60	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	10/31/2027	11/18/2027		16	60	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach	11/19/2027	11/29/2027		9	49	48
Collinsville Substation: abovegrade	11/30/2027	1/31/2028		54	45	48

Proposed Project Overlapping Construction Activities sound Levels at NR2 with MM NOI-1

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter) + Collinsville Substation PG&E IT Work	67
Collinsvile Substation: abovegrade; Northern Transition Approach; Submarine cable; 500 kV interconnection: structure installation (with helicopter); 500 kV interconnection:conductor installation (with helicopter)	67
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach	53
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Submarine cable + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	60
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	60
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + Northern Transition Approach	51
Collinsvile Substation: abovegrade	50

Proposed Project Overlapping Construction Activities sound Levels at NR2 with MM NOI-1

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade; Collinsville Substation: Site and ROW restoration	2/1/2028	7/17/2028	144	45	48
Max sound level	68				
Project days	694				
Days above 55 dBA	185				
Percentage of days above DBA	27%				

Proposed Project Overlapping Construction Activities sound Levels at NR2 with MM NOI-1

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade; Collinsville Substation: Site and ROW restoration	50

Proposed Project Overlapping Construction Activities sound Levels at NR2 with MM NOI-1	
Max sound level	68
Project days	694
Days above 55 dBA	185
Percentage of days above DBA	27%

Alternative 1 Activities sound Levels at NR1						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site development	5/1/26	8/29/26	9200	47		
Collinsville Substation: Below-grade	8/14/26	2/6/27	9200	48		
Collinsville Substation: abovegrade	1/23/27	2/15/28	9200	45		
230 kV overhead: access road	5/1/27	5/22/27	4690	46		
2310kV overhead:structure foundation installation	5/20/27	8/3/27	4690	49		
232 kV overhead:structure installation	8/3/27	10/19/27	4690	45		
230 kV Conductor installation (with helicopter)	10/20/27	12/6/27	4690	59		
230 kV Conductor installation (without helicopter)	10/20/27	12/6/27	4690	49		
230 kV submarine segment	7/1/27	10/31/27	2750	63	10	
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	9200	43		
Norhtern Transition Apporach	6/15/27	11/30/27	10400	40	10	
500 kV interconnection: structure foundation installation	5/17/27	6/11/27	9450	44		
500 kV interconnection: structure installation (with helicopter)	1/18/28	2/25/28	9450	59		
500 kV interconnection: structure installation (without helicopter)	1/18/28	2/25/28	9450	39		
500 kV interconnection:conductor installation (with helicopter)	1/18/28	2/25/28	9450	53		
500 kV interconnection:conductor installation (without helicopter)	1/18/28	2/25/28	9450	41		
12 kV distribution	6/1/26	7/16/26	8850	45		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	9200	42		

Alternative 1 Activities sound Levels at NR1			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	47	48	51
Collinsville Substation: Below-grade	48	48	51
Collinsville Substation: abovegrade	45	48	50
230 kV overhead: access road	46	48	50
2310kV overhead:structure foundation installation	49	48	51
232 kV overhead:structure installation	45	48	50
230 kV Conductor installation (with helicopter)	59	48	59
230 kV Conductor installation (without helicopter)	49	48	52
230 kV submarine segment	53	48	54
Collinsville Substation: Site and ROW restoration	43	48	49
Northern Transition Approach	30	48	48
500 kV interconnection: structure foundation installation	44	48	49
500 kV interconnection: structure installation (with helicopter)	59	48	59
500 kV interconnection: structure installation (without helicopter)	39	48	49
500 kV interconnection:conductor installation (with helicopter)	53	48	54
500 kV interconnection:conductor installation (without helicopter)	41	48	49
12 kV distribution	45	48	50
PG&E IT Work at Collinsville Substation	42	48	49

Alternative 1 Activities sound Levels at NR1 with MM NOI-2						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site developent	5/1/26	8/29/26	9200	47	10	
Colinsville Substation: Below-grade	8/14/26	2/6/27	9200	48	10	
Collinsville Substation: abovegrade	1/23/27	2/15/28	9200	45	10	
230 kV overhead: access road	5/1/27	5/22/27	4690	46		
2310kV overhead:structure foundation installation	5/20/27	8/3/27	4690	49		
232 kV overhead:structure installation	8/3/27	10/19/27	4690	45		
230 kV Conductor installation (with helicopter)	10/20/27	12/6/27	4690	60		
230 kV Conductor installation (without helicopter)	10/20/27	12/6/27	4690	54		
230 kV submarine segment	7/1/27	10/31/27	2750	63	10	
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	9200	43		
Norhtern Transition Apporach	6/15/27	11/30/27	10400	40	10	
500 kV interconnection: structure foundation installation	5/17/27	6/11/27	9450	44		
500 kV interconnection: structure installation (with helicopter)	1/18/28	2/25/28	9450	59		
500 kV interconnection: structure installation (without helicopter)	1/18/28	2/25/28	9450	39		
500 kV interconnection:conductor installation (with helicopter)	1/18/28	2/25/28	9450	53		
500 kV interconnection:conductor installation (without helicopter)	1/18/28	2/25/28	9450	41		
12 kV distribution	6/1/26	7/16/26	8850	45		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	9200	42	10	

Alternative 1 Activities sound Levels at NR1 with MM NOI-2			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	37	48	48
Collinsville Substation: Below-grade	38	48	49
Collinsville Substation: abovegrade	35	48	48
230 kV overhead: access road	46	48	50
2310kV overhead:structure foundation installation	49	48	51
232 kV overhead:structure installation	45	48	50
230 kV Conductor installation (with helicopter)	60	48	60
230 kV Conductor installation (without helicopter)	54	48	55
230 kV submarine segment	53	48	54
Collinsville Substation: Site and ROW restoration	43	48	49
Northern Transition Approach	30	48	48
500 kV interconnection: structure foundation installation	44	48	49
500 kV interconnection: structure installation (with helicopter)	59	48	59
500 kV interconnection: structure installation (without helicopter)	39	48	49
500 kV interconnection:conductor installation (with helicopter)	53	48	54
500 kV interconnection:conductor installation (without helicopter)	41	48	49
12 kV distribution	45	48	50
PG&E IT Work at Collinsville Substation	32	48	48

Alternative 1 Activities sound Levels at NR2a1					
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)
Collinsville Substation: Site developent	5/1/2026	8/29/2026	5400	52	
Colinsville Substation: Below-grade	8/14/2026	2/6/2027	5400	53	
Collinsvile Substation: abovegrade	1/23/2027	2/15/2028	5400	50	
230 kV overhead: access road	5/1/2027	5/22/2027	5560	45	
2310kV overhead:structure foundation installation	5/20/2027	8/3/2027	5560	47	
232 kV overhead:structure installation	8/3/2027	10/19/2027	5560	44	
230 kV Conductor installation (with helicopter)	10/20/2027	12/6/2027	5560	58	
230 kV Conductor installation (without helicopter)	10/20/2027	12/6/2027	5560	48	
230 kV submarine segment	7/1/2027	10/31/2027	10400	52	10
Collinsville Substation: Site and ROW restoration	2/1/2028	7/17/2028	9200	48	
Norhtern Transition Apporach	6/15/2027	11/30/2027	10400	52	10
500 kV interconnection: structure foundation installation	5/17/2027	6/11/2027	10950	43	
500 kV interconnection: structure installation (with helicopter)	1/18/2028	2/25/2028	10950	57	
500 kV interconnection: structure installation (without helicopter)	1/18/2028	2/25/2028	10950	38	
500 kV interconnection:conductor installation (with helicopter)	1/18/2028	2/25/2028	10950	51	
500 kV interconnection:conductor installation (without helicopter)	1/18/2028	2/25/2028	10950	39	
12 kV distribution	6/1/2026	7/16/2026	5870	49	
PG&E IT Work at Collinsville Substation	1/1/2027	8/31/2027	5400	47	

Alternative 1 Activities sound Levels at NR2a1

Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site developent	52	30	52
Colinsville Substation: Below-grade	53	30	53
Collinsville Substation: abovegrade	50	30	50
230 kV overhead: access road	45	30	45
2310kV overhead:structure foundation installation	47	30	47
232 kV overhead:structure installation	44	30	44
230 kV Conductor installation (with helicopter)	58	30	58
230 kV Conductor installation (without helicopter)	48	30	48
230 kV submarine segment	42	30	42
Collinsville Substation: Site and ROW restoration	48	30	49
Norhtern Transition Apporach	42	30	42
500 kV interconnection: structure foundation installation	43	30	43
500 kV interconnection: structure installation (with helicopter)	57	30	57
500 kV interconnection: structure installation (without helicopter)	38	30	38
500 kV interconnection:conductor installation (with helicopter)	51	30	51
500 kV interconnection:conductor installation (without helicopter)	39	30	40
12 kV distribution	49	30	49
PG&E IT Work at Collinsville Substation	47	48	51

Alternative 1 Activities sound Levels at NR2a1 with MM NOI-2					
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)
Collinsville Substation: Site development	5/1/26	8/29/26	5400	52	10
Collinsville Substation: Below-grade	8/14/26	2/6/27	5400	53	10
Collinsville Substation: abovegrade	1/23/27	2/15/28	5400	50	10
230 kV overhead: access road	5/1/27	5/22/27	5560	45	
2310kV overhead:structure foundation installation	5/20/27	8/3/27	5560	47	
232 kV overhead:structure installation	8/3/27	10/19/27	5560	44	
230 kV Conductor installation (with helicopter)	10/20/27	12/6/27	5560	58	
230 kV Conductor installation (without helicopter)	10/20/27	12/6/27	5560	52	
230 kV submarine segment	7/1/27	10/31/27	10400	52	10
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	9200	48	
Norhtern Transition Apporach	6/15/27	11/30/27	10400	52	10
500 kV interconnection: structure foundation installation	5/17/27	6/11/27	10950	43	
500 kV interconnection: structure installation (with helicopter)	1/18/28	2/25/28	10950	57	
500 kV interconnection: structure installation (without helicopter)	1/18/28	2/25/28	10950	38	
500 kV interconnection:conductor installation (with helicopter)	1/18/28	2/25/28	10950	51	
500 kV interconnection:conductor installation (without helicopter)	1/18/28	2/25/28	10950	39	
12 kV distribution	6/1/26	7/16/26	5870	49	
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	5400	47	10

Alternative 1 Activities sound Levels at NR2a1 with MM NOI-2			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site developent	42	30	42
Colinsville Substation: Below-grade	43	30	43
Collinsvile Substation: abovegrade	40	30	40
230 kV overhead: access road	45	30	45
2310kV overhead:structure foundation installation	47	30	47
232 kV overhead:structure installation	44	30	44
230 kV Conductor installation (with helicopter)	58	30	58
230 kV Conductor installation (without helicopter)	52	30	52
230 kV submarine segment	42	30	42
Collinsville Substation: Site and ROW restoration	48	30	49
Norhtern Transition Apporach	42	30	42
500 kV interconnection: structure foundation installation	43	30	43
500 kV interconnection: structure installation (with helicopter)	57	30	57
500 kV interconnection: structure installation (without helicopter)	38	30	38
500 kV interconnection:conductor installation (with helicopter)	51	30	51
500 kV interconnection:conductor installation (without helicopter)	39	30	40
12 kV distribution	49	30	49
PG&E IT Work at Collinsville Substation	37	48	48

Alt 1 Overlapping Construction Activities sound Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026		26	47
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/15/2026		39	48
Collinsville Substation: Site development	7/16/2026	8/13/2026		25	47
Collinsville Substation: Site development + Collinsville Substation: Below-grade	8/14/2026	8/28/2026		13	48
Collinsville Substation: Below-grade	8/29/2026	12/31/2026		107	48
Collinsville Substation: Below-grade + PG&E IT work at Collinsville Substation	1/1/2027	1/22/2027		19	48
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	1/23/2027	2/5/2027		12	48
Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	2/6/2027	4/30/2027		72	47
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT work at Collinsville Substation	5/1/2027	5/16/2027		13	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation + PG&E IT work at Collinsville Substation	5/17/2027	5/19/2027		3	48

Alt 1 Overlapping Construction Activities sound Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	51
Collinsville Substation: Site development + 12 kV distribution	55
Collinsville Substation: Site development	51
Collinsville Substation: Site development + Collinsville Substation: Below-grade	53
Collinsville Substation: Below-grade	51
Collinsville Substation: Below-grade + PG&E IT work at Collinsville Substation	52
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	53
Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	51
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT work at Collinsville Substation	52
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation + PG&E IT work at Collinsville Substation	52

Alt 1 Overlapping Construction Activities sound Levels at NR1

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	5/20/2027	5/21/2027	2	53	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	5/22/2027	6/10/2027	17	52	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + PG&E IT work at Collinsville Substation	6/11/2027	6/14/2027	3	51	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	6/15/2027	6/30/2027	14	51	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	7/1/2027	8/2/2027	28	55	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	8/3/2027	8/31/2027	25	54	48

Alt 1 Overlapping Construction Activities sound Levels at NR1

Overlapping constuction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	54
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	53
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + PG&E IT work at Collinsville Substation	53
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	53
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	56
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	55

Alt 1 Overlapping Construction Activities sound Levels at NR1

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach	9/1/2027	10/18/2027		41	54	48
Collinsville Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	10/19/2027	10/19/2027		1	54	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	10/20/2027	10/30/2027		10	60	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	10/31/2027	11/29/2027		25	59	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter)	11/30/2027	12/5/2027		5	59	48
Collinsville Substation: abovegrade	12/6/2027	1/17/2028		37	45	48
Collinsville Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	1/18/2028	1/31/2028		12	60	48
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/1/2028	2/14/2028		12	60	48

Alt 1 Overlapping Construction Activities sound Levels at NR1

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach	55
Collinsvile Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	55
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	60
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	60
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter)	60
Collinsvile Substation: abovegrade	50
Collinsvile Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	60
Collinsvile Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	60

Alt 1 Overlapping Construction Activities sound Levels at NR1

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/15/2028	2/24/2028	9	60	48
Collinsville Substation: Site and ROW restoration	2/25/2028	7/17/2028	123	43	48

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection: conductor installation (without helicopter)	60
Collinsville Substation: Site and ROW restoration	49

Alt 1 Overlapping Construction Activities sound Levels at NR1	
Min sound level	49
Max sound level	60
Project days	693
Days above 55 dBA	101
Percentage of days above DBA	15%

Alt 1 Overlapping Construction Activities sound Levels at NR2					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026		26	30
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/15/2026		39	30
Collinsville Substation: Site development	7/16/2026	8/13/2026		25	30
Collinsville Substation: Site development + Collinsville Substation: Below-grade	8/14/2026	8/28/2026		13	30
Collinsville Substation: Below-grade	8/29/2026	12/31/2026		107	30
Collinsville Substation: Below-grade + PG&E IT work at Collinsville Substation	1/1/2027	1/22/2027		19	30
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	1/23/2027	2/5/2027		12	30
Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	2/6/2027	4/30/2027		72	30
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT work at Collinsville Substation	5/1/2027	5/16/2027		13	30
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation + PG&E IT work at Collinsville Substation	5/17/2027	5/19/2027		3	30

Alt 1 Overlapping Construction Activities sound Levels at NR2	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	52
Collinsville Substation: Site development + 12 kV distribution	54
Collinsville Substation: Site development	52
Collinsville Substation: Site development + Collinsville Substation: Below-grade	55
Collinsville Substation: Below-grade	53
Collinsville Substation: Below-grade + PG&E IT work at Collinsville Substation	54
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	55
Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	51
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT work at Collinsville Substation	52
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation + PG&E IT work at Collinsville Substation	53

Alt 1 Overlapping Construction Activities sound Levels at NR2

Overlapping constuction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	5/20/2027	5/21/2027	2	54	30
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	5/22/2027	6/10/2027	17	53	30
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + PG&E IT work at Collinsville Substation	6/11/2027	6/14/2027	3	53	30
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	6/15/2027	6/30/2027	14	53	30
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	7/1/2027	8/2/2027	28	53	30
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	8/3/2027	8/31/2027	25	53	30

Alt 1 Overlapping Construction Activities sound Levels at NR2

Overlapping constuction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	54
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	53
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + PG&E IT work at Collinsville Substation	53
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	53
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	53
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	53

Alt 1 Overlapping Construction Activities sound Levels at NR2

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)	
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach	9/1/2027	10/18/2027		41	52	30
Collinsville Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	10/19/2027	10/19/2027		1	51	30
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	10/20/2027	10/30/2027		10	58	30
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	10/31/2027	11/29/2027		25	58	30
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter)	11/30/2027	12/5/2027		5	58	30
Collinsville Substation: abovegrade	12/6/2027	1/17/2028		37	50	30
Collinsville Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	1/18/2028	1/31/2028		12	59	30
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/1/2028	2/14/2028		12	59	30

Alt 1 Overlapping Construction Activities sound Levels at NR2

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach	52
Collinsvile Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	51
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	58
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	58
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter)	58
Collinsvile Substation: abovegrade	50
Collinsvile Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	59
Collinsvile Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	59

Alt 1 Overlapping Construction Activities sound Levels at NR2

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/15/2028	2/24/2028	9	59	30
Collinsville Substation: Site and ROW restoration	2/25/2028	7/17/2028	123	48	30

Alt 1 Overlapping Construction Activities sound Levels at NR2

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	59
Collinsville Substation: Site and ROW restoration	49

Alt 1 Overlapping Construction Activities sound Levels at NR2	
Min sound level	49
Max sound level	59
Project days	693
Days above 55 dBA	73
Percentage of days above DBA	11%

Alt 1 Overlapping Construction Activities sound Levels at NR1 with MM NOI-1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: Site development	5/1/2026	5/31/2026		26	37	48
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/15/2026		39	53	48
Collinsville Substation: Site development	7/16/2026	8/13/2026		25	37	48
Collinsville Substation: Site development + Collinsville Substation: Below-grade	8/14/2026	8/28/2026		13	41	48
Collinsville Substation: Below-grade	8/29/2026	12/31/2026		107	38	48
Collinsville Substation: Below-grade + PG&E IT work at Collinsville Substation	1/1/2027	1/22/2027		19	39	48
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	1/23/2027	2/5/2027		12	41	48
Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	2/6/2027	4/30/2027		72	37	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT work at Collinsville Substation	5/1/2027	5/16/2027		13	47	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation + PG&E IT work at Collinsville Substation	5/17/2027	5/19/2027		3	48	48

Alt 1 Overlapping Construction Activities sound Levels at NR1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	48
Collinsville Substation: Site development + 12 kV distribution	54
Collinsville Substation: Site development	48
Collinsville Substation: Site development + Collinsville Substation: Below-grade	49
Collinsville Substation: Below-grade	49
Collinsville Substation: Below-grade + PG&E IT work at Collinsville Substation	49
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	49
Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT work at Collinsville Substation	50
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation + PG&E IT work at Collinsville Substation	51

Alt 1 Overlapping Construction Activities sound Levels at NR1 with MM NOI-1					
Overlapping constuction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	5/20/2027	5/21/2027	2	52	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	5/22/2027	6/10/2027	17	50	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + PG&E IT work at Collinsville Substation	6/11/2027	6/14/2027	3	49	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	6/15/2027	6/30/2027	14	49	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	7/1/2027	8/2/2027	28	54	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	8/3/2027	8/31/2027	25	54	48

Alt 1 Overlapping Construction Activities sound Levels at NR1 with MM NOI-1	
Overlapping constuction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	53
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	52
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + PG&E IT work at Collinsville Substation	51
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	51
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	55
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	55

Alt 1 Overlapping Construction Activities sound Levels at NR1 with MM NOI-1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq	Existing daytime ambient	
				dBA)	sound level (NM2) (Leq dBA)	
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Northern Transition Approach	9/1/2027	10/18/2027		41	60	48
Collinsville Substation: abovegrade + 230 kV submarine segment + Northern Transition Approach	10/19/2027	10/19/2027		1	53	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Northern Transition Approach	10/20/2027	10/30/2027		10	61	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Northern Transition Approach	10/31/2027	11/29/2027		25	60	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter)	11/30/2027	12/5/2027		5	60	48
Collinsville Substation: abovegrade	12/6/2027	1/17/2028		37	35	48
Collinsville Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	1/18/2028	1/31/2028		12	60	48
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/1/2028	2/14/2028		12	60	48

Alt 1 Overlapping Construction Activities sound Levels at NR1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach	60
Collinsvile Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	54
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	61
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	60
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter)	60
Collinsvile Substation: abovegrade	48
Collinsvile Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	60
Collinsvile Substation: abovegrade + Collinsvile Substation: Site and ROW restoration + 500 kV interconnection: structure installation (with out helicopter) + 500 kV interconnection:conductor installation (without helicopter)	60

Alt 1 Overlapping Construction Activities sound Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/15/2028	2/24/2028	9	60	48
Collinsville Substation: Site and ROW restoration	2/25/2028	7/17/2028	123	43	48

Alt 1 Overlapping Construction Activities sound Levels at NR1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	60
Collinsville Substation: Site and ROW restoration	49

Alt 1 Overlapping Construction Activities sound Levels at NR1 with MM NOI-1	
Min sound level	48
Max sound level	61
Project days	693
Days above 55 dBA	114
Percentage of days above 55 DBA	16%

Alt 1 Overlapping Construction Activities sound Levels at NR2a1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026		26	42
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/15/2026		39	52
Collinsville Substation: Site development	7/16/2026	8/13/2026		25	42
Collinsville Substation: Site development + Collinsville Substation: Below-grade	8/14/2026	8/28/2026		13	45
Collinsville Substation: Below-grade	8/29/2026	12/31/2026		107	43
Collinsville Substation: Below-grade + PG&E IT work at Collinsville Substation	1/1/2027	1/22/2027		19	44
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	1/23/2027	2/5/2027		12	45
Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	2/6/2027	4/30/2027		72	41
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT work at Collinsville Substation	5/1/2027	5/16/2027		13	46
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation + PG&E IT work at Collinsville Substation	5/17/2027	5/19/2027		3	48

Alt 1 Overlapping Construction Activities sound Levels at NR2a1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	42
Collinsville Substation: Site development + 12 kV distribution	52
Collinsville Substation: Site development	42
Collinsville Substation: Site development + Collinsville Substation: Below-grade	45
Collinsville Substation: Below-grade	43
Collinsville Substation: Below-grade + PG&E IT work at Collinsville Substation	44
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	45
Collinsville Substation: abovegrade + PG&E IT work at Collinsville Substation	42
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT work at Collinsville Substation	46
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation + PG&E IT work at Collinsville Substation	48

Alt 1 Overlapping Construction Activities sound Levels at NR2a1 with MM NOI-1					
Overlapping constuction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	5/20/2027	5/21/2027	2	50	30
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	5/22/2027	6/10/2027	17	49	30
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + PG&E IT work at Collinsville Substation	6/11/2027	6/14/2027	3	48	30
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	6/15/2027	6/30/2027	14	49	30
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	7/1/2027	8/2/2027	28	50	30
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	8/3/2027	8/31/2027	25	48	30

Alt 1 Overlapping Construction Activities sound Levels at NR2a1 with MM NOI-1	
Overlapping constuction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	50
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT work at Collinsville Substation	49
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + PG&E IT work at Collinsville Substation	48
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	49
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	50
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + PG&E IT work at Collinsville Substation	48

Alt 1 Overlapping Construction Activities sound Levels at NR2a1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Northern Transition Approach	9/1/2027	10/18/2027		41	30
Collinsville Substation: abovegrade + 230 kV submarine segment + Northern Transition Approach	10/19/2027	10/19/2027		1	30
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Northern Transition Approach	10/20/2027	10/30/2027		10	30
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Northern Transition Approach	10/31/2027	11/29/2027		25	30
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter)	11/30/2027	12/5/2027		5	30
Collinsville Substation: abovegrade	12/6/2027	1/17/2028		37	30
Collinsville Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	1/18/2028	1/31/2028		12	30
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/1/2028	2/14/2028		12	30

Alt 1 Overlapping Construction Activities sound Levels at NR2a1 with MM NOI-1	
Overlapping constuction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach	48
Collinsvile Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	46
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	58
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	58
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter)	58
Collinsvile Substation: abovegrade	40
Collinsvile Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	58
Collinsvile Substation: abovegrade + Collinsvile Substation: Site and ROW restoration + 500 kV interconnection: structure installation (with out helicopter) + 500 kV interconnection:conductor installation (without helicopter)	59

Alt 1 Overlapping Construction Activities sound Levels at NR2a1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/15/2028	2/24/2028	9	59	30
Collinsville Substation: Site and ROW restoration	2/25/2028	7/17/2028	123	48	48

Alt 1 Overlapping Construction Activities sound Levels at NR2a1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	59
Collinsville Substation: Site and ROW restoration	51

Alt 1 Overlapping Construction Activities sound Levels at NR2a1 with MM NOI-1	
Min sound level	40
Max sound level	59
Project days	693
Days above 55 dBA	73
Percentage of days above 55 DBA	11%

Alternative 2 Activities sound Levels at NR1						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site development	5/1/26	9/14/26	19170	41		
Colinsville Substation: Below-grade	9/1/26	2/24/27	19170	42		
Collinsville Substation: abovegrade	2/10/27	3/3/28	19170	39		
230 kV overhead: access road	5/1/27	6/8/27	5580	45		
2300kV overhead:structure foundation installation	5/20/27	9/29/27	5580	47		
230 kV overhead:structure installation	8/30/27	1/22/28	5580	44		
230 kV Conductor installation (with helicopter)	10/20/27	4/7/27	5580	58		
230 kV Conductor installation (without helicopter)	10/20/27	4/7/27	5580	48		
230 kV submarine segment	7/1/27	10/31/27	5580	63		10
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	18870	36		
Northern Transition Approach	6/15/27	11/30/27	19170	48		10
500 kV interconnection: structure foundation installation	5/17/27	6/11/27	24500	37		
500 kV interconnection: structure installation (with helicopter)	1/18/28	2/25/28	19670	52		
500 kV interconnection: structure installation (without helicopter)	1/18/28	2/25/28	19670	33		
500 kV interconnection:conductor installation (with helicopter)	1/18/28	2/25/28	19670	46		
500 kV interconnection:conductor installation (without helicopter)	1/18/28	2/25/28	19670	34		
12 kV distribution	6/1/26	7/16/26	18550	39		
500 kV Transposition Structures: Foundation Installation	6/1/27	7/28/27	20800	32		

Alternative 2 Activities sound Levels at NR1			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	41	48	49
Colinsville Substation: Below-grade	42	48	49
Collinsville Substation: abovegrade	39	48	49
230 kV overhead: access road	45	48	50
2300kV overhead:structure foundation installation	47	48	51
230 kV overhead:structure installation	44	48	49
230 kV Conductor installation (with helicopter)	58	49	58
230 kV Conductor installation (without helicopter)	48	48	51
230 kV submarine segment	53	48	54
Collinsville Substation: Site and ROW restoration	26	48	48
Northern Transition Approach	38	48	48
500 kV interconnection: structure foundation installation	37	48	48
500 kV interconnection: structure installation (with helicopter)	52	48	54
500 kV interconnection: structure installation (without helicopter)	33	49	49
500 kV interconnection:conductor installation (with helicopter)	46	48	50
500 kV interconnection:conductor installation (without helicopter)	34	49	49
12 kV distribution	39	48	49
500 kV Transposition Structures: Foundation Installation	32	48	48

Alternative 2 Activities sound Levels at NR1

Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)
500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/18/2028	2/29/2028	20800	45.9	
500 kV Transposition Structures: Structure and Conductor Installation (no helo)	1/18/2028	2/29/2028	20800	34.9	
PG&E IT Work at Collinsville Substation	1/1/2027	8/31/2027	19170	35.7	

Alternative 2 Activities sound Levels at NR1			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
500 kV Transposition Structures: Structure and Conductor Installation (helo)	45.9	48	50.1
500 kV Transposition Structures: Structure and Conductor Installation (no helo)	34.9	48	48.2
PG&E IT Work at Collinsville Substation	35.7	48	48.2

Alternative 2 Activities sound Levels at NR1 with MM NOI-2						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site developent	5/1/26	9/14/26	19170	41	10	
Colinsville Substation: Below-grade	9/1/26	2/24/27	19170	42	10	
Collinsvile Substation: abovegrade	2/10/27	3/3/28	19170	39	10	
230 kV overhead: access road	5/1/27	6/8/27	5580	45		
2300kV overhead:structure foundation installation	5/20/27	9/29/27	5580	47		
230 kV overhead:structure installation	8/30/27	1/22/28	5580	44		
230 kV Conductor installation (with helicopter)	10/20/27	4/7/27	5580	58		
230 kV Conductor installation (without helicopter)	10/20/27	4/7/27	5580	48		
230 kV submarine segment	7/1/27	10/31/27	5580	63	10	
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	18870	36		
Norhtern Transition Apporach	6/15/27	11/30/27	19170	48	10	
500 kV interconnection: structure foundation installation	5/17/27	6/11/27	24500	37		

Alternative 2 Activities sound Levels at NR1 with MM NOI-2			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site developent	45	48	50
Colinsville Substation: Below-grade	46	48	50
Collinsvile Substation: abovegrade	43	48	49
230 kV overhead: access road	45	48	50
2300kV overhead:structure foundation installation	47	48	51
230 kV overhead:structure installation	44	48	49
230 kV Conductor installation (with helicopter)	58	49	59
230 kV Conductor installation (without helicopter)	52	48	54
230 kV submarine segment	53	48	54
Collinsville Substation: Site and ROW restoration	50	48	52
Norhtern Transition Apporach	71	48	71
500 kV interconnection: structure foundation installation	37	48	48

Alternative 2 Activities sound Levels at NR1 with MM NOI-2			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
500 kV interconnection: structure installation (with helicopter)	52	48	54
500 kV interconnection: structure installation (without helicopter)	33	49	49
500 kV interconnection:conductor installation (with helicopter)	46	48	50
500 kV interconnection:conductor installation (without helicopter)	34	49	49
12 kV distribution	39	48	49
500 kV Transposition Structures: Foundation Installation	32	48	48
500 kV Transposition Structures: Structure and Conductor Installation (helo)	45.9	48	50.1
500 kV Transposition Structures: Structure and Conductor Installation (no helo)	34.9	48	48.2
PG&E IT Work at Collinsville Substation	40.4	48	48.7

Alternative 2 Activities sound Levels at NR1 with MM NOI-2			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
500 kV interconnection: structure installation (with helicopter)	52	48	54
500 kV interconnection: structure installation (without helicopter)	33	49	49
500 kV interconnection:conductor installation (with helicopter)	46	48	50
500 kV interconnection:conductor installation (without helicopter)	34	49	49
12 kV distribution	39	48	49
500 kV Transposition Structures: Foundation Installation	32	48	48
500 kV Transposition Structures: Structure and Conductor Installation (helo)	45.9	48	50.1
500 kV Transposition Structures: Structure and Conductor Installation (no helo)	34.9	48	48.2
PG&E IT Work at Collinsville Substation	40.4	48	48.7

Alternative 2 Activities sound Levels at NR6						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site development	5/1/26	8/29/26	5400	52		
Collinsville Substation: Below-grade	8/14/26	2/6/27	5400	53		
Collinsville Substation: abovegrade	1/23/27	2/15/28	5400	50		
230 kV overhead: access road	5/1/27	5/22/27	5560	45		
2310kV overhead:structure foundation installation	5/20/27	8/3/27	5560	47		
232 kV overhead:structure installation	8/3/27	10/19/27	5560	44		
230 kV Conductor installation (with helicopter)	10/20/27	12/6/27	5560	58		
230 kV Conductor installation (without helicopter)	10/20/27	12/6/27	5560	48		
230 kV submarine segment	7/1/27	10/31/27	10400	52		10
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	9200	48		
Norhtern Transition Apporach	6/15/27	11/30/27	10400	52		10
500 kV interconnection: structure foundation installation	5/17/27	6/11/27	10950	43		
500 kV interconnection: structure installation (with helicopter)	1/18/28	2/25/28	10950	57		
500 kV interconnection: structure installation (without helicopter)	1/18/28	2/25/28	10950	38		
500 kV interconnection:conductor installation (with helicopter)	1/18/28	2/25/28	10950	51		
500 kV interconnection:conductor installation (without helicopter)	1/18/28	2/25/28	10950	39		
12 kV distribution	6/1/26	7/16/26	5870	49		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	5400	47		

Alternative 2 Activities sound Levels at NR6			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	52	30	52
Collinsville Substation: Below-grade	53	30	53
Collinsville Substation: abovegrade	50	30	50
230 kV overhead: access road	45	30	45
2310kV overhead:structure foundation installation	47	30	47
232 kV overhead:structure installation	44	30	44
230 kV Conductor installation (with helicopter)	58	30	58
230 kV Conductor installation (without helicopter)	48	30	48
230 kV submarine segment	42	30	42
Collinsville Substation: Site and ROW restoration	48	30	49
Northern Transition Approach	42	30	42
500 kV interconnection: structure foundation installation	43	30	43
500 kV interconnection: structure installation (with helicopter)	57	30	57
500 kV interconnection: structure installation (without helicopter)	38	30	38
500 kV interconnection:conductor installation (with helicopter)	51	30	51
500 kV interconnection:conductor installation (without helicopter)	39	30	40
12 kV distribution	49	30	49
PG&E IT Work at Collinsville Substation	47	48	51

Alternative 2 Activities sound Levels at NR6 with MM NOI-2					
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)
Collinsville Substation: Site development	5/1/26	8/29/26	5400	52	10
Collinsville Substation: Below-grade	8/14/26	2/6/27	5400	53	10
Collinsville Substation: abovegrade	1/23/27	2/15/28	5400	50	10
230 kV overhead: access road	5/1/27	5/22/27	5560	45	
2310kV overhead:structure foundation installation	5/20/27	8/3/27	5560	47	
232 kV overhead:structure installation	8/3/27	10/19/27	5560	44	
230 kV Conductor installation (with helicopter)	10/20/27	12/6/27	5560	58	
230 kV Conductor installation (without helicopter)	10/20/27	12/6/27	5560	48	
230 kV submarine segment	7/1/27	10/31/27	10400	52	10
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	9200	48	
Northern Transition Approach	6/15/27	11/30/27	10400	52	10
500 kV interconnection: structure foundation installation	5/17/27	6/11/27	10950	43	
500 kV interconnection: structure installation (with helicopter)	1/18/28	2/25/28	10950	57	

Alternative 2 Activities sound Levels at NR6 with MM NOI-2			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site developent	45	30	45
Colinsville Substation: Below-grade	47	30	47
Collinsvile Substation: abovegrade	47	30	47
230 kV overhead: access road	44	30	45
2310kV overhead:structure foundation installation	47	30	47
232 kV overhead:structure installation	43	30	44
230 kV Conductor installation (with helicopter)	58	30	58
230 kV Conductor installation (without helicopter)	52	30	52
230 kV submarine segment	50	30	50
Collinsville Substation: Site and ROW restoration	51	30	51
Norhtern Transition Apporach	71	30	71
500 kV interconnection: structure foundation installation	36	30	37
500 kV interconnection: structure installation (with helicopter)	50	30	50

Alternative 2 Activities sound Levels at NR6 with MM NOI-2					
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)
500 kV interconnection: structure installation (without helicopter)	1/18/28	2/25/28	10950	38	
500 kV interconnection:conductor installation (with helicopter)	1/18/28	2/25/28	10950	51	
500 kV interconnection:conductor installation (without helicopter)	1/18/28	2/25/28	10950	39	
12 kV distribution	6/1/26	7/16/26	5870	49	
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	5400	47	

Alternative 2 Activities sound Levels at NR6 with MM NOI-2			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
500 kV interconnection: structure installation (without helicopter)	31	30	33
500 kV interconnection:conductor installation (with helicopter)	44	30	45
500 kV interconnection:conductor installation (without helicopter)	32	30	34
12 kV distribution	62	30	62
PG&E IT Work at Collinsville Substation	64	30	64

Alternative 2 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026		26	41
Collinsville Substation: Site development, 12 kV distribution	6/1/2026	7/15/2026		39	43
Collinsville Substation: Site development	7/16/2026	8/31/2026		40	41
Collinsville Substation: Site development, Collinsville Substation: Below-grade	9/1/2026	9/13/2026		11	44
Collinsville Substation: Below-grade	9/14/2026	12/31/2026		128	42
Collinsville Substation: Below-grade + PG&E IT Work	1/1/2027	2/9/2027		34	43
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	2/10/2027	2/23/2027		12	44
Collinsville Substation: Above-grade + PG&E IT Work	2/24/2027	4/30/2027		57	40
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/16/2027		13	46
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027		3	46
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/20/2027	5/31/2027		10	50

Alternative 2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	49
Collinsville Substation: Site development, 12 kV distribution	49
Collinsville Substation: Site development	49
Collinsville Substation: Site development, Collinsville Substation: Below-grade	50
Collinsville Substation: Below-grade	49
Collinsville Substation: Below-grade + PG&E IT Work	49
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	50
Collinsville Substation: Above-grade + PG&E IT Work	49
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	50
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	50
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	52

Alternative 2 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/1/2027	6/7/2027	6	50	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/8/2027	6/10/2027	3	51	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/11/2027	6/14/2027	3	53	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/15/2027	6/30/2027	14	48	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	7/1/2027	7/27/2027	23	54	48

Alternative 2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	52
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	53
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	54
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	51
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	55

Alternative 2 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	7/28/2027	8/29/2027		28	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	8/30/2027	8/31/2027		26	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/1/2027	9/28/2027		24	48
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/29/2027	10/19/2027		18	48
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	10/20/2027	10/30/2027		10	48
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	10/31/2027	11/29/2027		25	48

Alternative 2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	55
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	56
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	56
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	55
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	59
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	58

Alternative 2 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	11/30/2027	1/17/2028	42	58	48
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/18/2028	1/21/2028	4	59	48
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/22/2028	1/31/2028	8	59	48
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/1/2028	2/24/2028	21	59	48

Alternative 2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	58
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	60
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	59
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	59

Alternative 2 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/25/2028	2/28/2028	3	58	48

Alternative 2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	58

Alternative 2 Overlapping Noise Levels at NR1	
Min noise level	49
Max noise level	60
Project days	631
Days above 55 dBA	163
Percentage of days above 55 DBA	26%

Alternative 2 Overlapping Noise Levels at NR6					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Site development	5/1/26	5/31/26	26	55	30
Collinsville Substation: Site development, 12 kV distribution	6/1/26	7/15/26	39	63	30
Collinsville Substation: Site development	7/16/26	8/31/26	40	55	30
Collinsville Substation: Site development, Collinsville Substation: Below-grade	9/1/26	9/14/26	12	58	30
Collinsville Substation: Below-grade	9/15/26	12/31/26	127	56	30
Collinsville Substation: Below-grade + PG&E IT Work	1/1/27	2/9/27	34	57	30
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	2/10/27	2/24/27	13	58	30
Collinsville Substation: Above-grade + PG&E IT Work	2/25/27	4/30/27	56	55	30
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	5/1/27	5/16/27	13	55	30
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/27	5/19/27	3	57	30
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/20/27	5/31/27	10	57	30

Alternative 2 Overlapping Noise Levels at NR6	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	55
Collinsville Substation: Site development, 12 kV distribution	63
Collinsville Substation: Site development	55
Collinsville Substation: Site development, Collinsville Substation: Below-grade	58
Collinsville Substation: Below-grade	56
Collinsville Substation: Below-grade + PG&E IT Work	57
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	58
Collinsville Substation: Above-grade + PG&E IT Work	55
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	55
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	57
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	57

Alternative 2 Overlapping Noise Levels at NR6					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/1/27	6/7/27	6	66	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/8/27	6/10/27	3	71	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/11/27	6/14/27	3	55	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/15/27	6/30/27	14	64	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	7/1/27	7/27/27	23	64	30

Alternative 2 Overlapping Noise Levels at NR6	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	66
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	71
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	55
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	64
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	64

Alternative 2 Overlapping Noise Levels at NR6					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	7/28/27	8/29/27		28	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	8/30/27	8/31/27		2	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/1/27	9/28/27		24	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/29/27	10/19/27		18	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	10/20/27	10/30/27		10	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	10/31/27	11/29/27		25	30

Alternative 2 Overlapping Noise Levels at NR6	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	55
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	56
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	54
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	53
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	59
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	59

Alternative 2 Overlapping Noise Levels at NR6					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	11/30/27	1/7/28	34	59	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/8/28	1/22/28	13	81	30
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/23/28	1/31/28	7	81	30
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/1/28	2/25/28	22	81	30

Alternative 2 Overlapping Noise Levels at NR6	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	59
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	81
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	81
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	81

Alternative 2 Overlapping Noise Levels at NR6					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/26/28	2/28/28	2	78	30

Alternative 2 Overlapping Noise Levels at NR6	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	78

Alternative 2 Overlapping Noise Levels at NR6	
Min sound level	53
Max sound level	81
Project days	607
Days above 55 dBA	399
Percentage of days above DBA	66%

Alternative 2 Overlapping Noise Levels at NR1 with MM NOI-1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: Site development	5/1/2026	5/31/2026	26	45	48	
Collinsville Substation: Site development, 12 kV distribution	6/1/2026	7/15/2026	39	46	48	
Collinsville Substation: Site development	7/16/2026	8/31/2026	40	45	48	
Collinsville Substation: Site development, Collinsville Substation: Below-grade	9/1/2026	9/14/2026	12	48	48	
Collinsville Substation: Below-grade	9/15/2026	12/31/2026	127	46	48	
Collinsville Substation: Below-grade + PG&E IT Work	1/1/2027	2/9/2027	34	47	48	
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	2/10/2027	2/24/2027	13	49	48	
Collinsville Substation: Above-grade + PG&E IT Work	2/25/2027	4/30/2027	56	45	48	
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/16/2027	13	48	48	
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027	3	52	48	
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/20/2027	5/31/2027	10	53	48	

Alternative 2 Overlapping Noise Levels at NR1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	50
Collinsville Substation: Site development, 12 kV distribution	50
Collinsville Substation: Site development	50
Collinsville Substation: Site development, Collinsville Substation: Below-grade	51
Collinsville Substation: Below-grade	50
Collinsville Substation: Below-grade + PG&E IT Work	51
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	51
Collinsville Substation: Above-grade + PG&E IT Work	50
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	51
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	54
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	54

Alternative 2 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/1/2027	6/7/2027	6	51	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/8/2027	6/10/2027	3	71	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/11/2027	6/14/2027	3	53	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/15/2027	6/30/2027	14	71	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	7/1/2027	7/27/2027	23	71	48

Alternative 2 Overlapping Noise Levels at NR1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	53
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	71
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	54
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	71
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	71

Alternative 2 Overlapping Noise Levels at NR1 with MM NOI-1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	7/28/2027	8/29/2027		28	71	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	8/30/2027	8/31/2027		26	71	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/1/2027	9/28/2027		24	71	48
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/29/2027	10/19/2027		18	71	48
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	10/20/2027	10/30/2027		10	71	48
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	10/31/2027	11/29/2027		25	60	48

Alternative 2 Overlapping Noise Levels at NR1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	71
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	71
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	71
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	71
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	71
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	60

Alternative 2 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	11/30/2027	1/7/2028	34	59	48
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/8/2028	1/22/2028	13	60	48
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/23/2028	1/31/2028	7	60	48
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/1/2028	2/25/2028	22	60	48

Alternative 2 Overlapping Noise Levels at NR1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	59
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	60
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	60
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	60

Alternative 2 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/26/2028	2/28/2028	2	59.2	48

Alternative 2 Overlapping Noise Levels at NR1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	59.5

Alternative 2 Overlapping Noise Levels at NR1 with MM NOI-1	
Min sound level	50
Max sound level	71
Project days	631
Days above 55 dBA	249
Percentage of days above 55 DBA	39%

Alternative 2 Overlapping Noise Levels at NR6 with MM NOI-1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: Site development	5/1/2026	5/31/2026	26	45	30	
Collinsville Substation: Site development, 12 kV distribution	6/1/2026	7/15/2026	39	62	30	
Collinsville Substation: Site development	7/16/2026	8/31/2026	40	45	30	
Collinsville Substation: Site development, Collinsville Substation: Below-grade	9/1/2026	9/14/2026	12	49	30	
Collinsville Substation: Below-grade	9/15/2026	12/31/2026	127	47	30	
Collinsville Substation: Below-grade + PG&E IT Work	1/1/2027	2/9/2027	34	48	30	
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	2/10/2027	2/24/2027	13	50	30	
Collinsville Substation: Above-grade + PG&E IT Work	2/25/2027	4/30/2027	56	48	30	
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/16/2027	13	49	30	
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027	3	53	30	
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/20/2027	5/31/2027	10	54	30	

Alternative 2 Overlapping Noise Levels at NR6 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	45
Collinsville Substation: Site development, 12 kV distribution	62
Collinsville Substation: Site development	45
Collinsville Substation: Site development, Collinsville Substation: Below-grade	49
Collinsville Substation: Below-grade	47
Collinsville Substation: Below-grade + PG&E IT Work	48
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	50
Collinsville Substation: Above-grade + PG&E IT Work	48
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	49
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	53
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	54

Alternative 2 Overlapping Noise Levels at NR6 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/1/2027	6/7/2027	6	64	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/8/2027	6/10/2027	3	71	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/11/2027	6/14/2027	3	51	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	6/15/2027	6/30/2027	14	72	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	7/1/2027	7/27/2027	23	72	30

Alternative 2 Overlapping Noise Levels at NR6 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	64
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	71
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	51
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	72
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + PG&E IT Work	72

Alternative 2 Overlapping Noise Levels at NR6 with MM NOI-1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	7/28/2027	8/29/2027		28	71	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	8/30/2027	8/31/2027		26	71	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/1/2027	9/28/2027		24	71	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/29/2027	10/19/2027		18	71	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	10/20/2027	10/30/2027		10	71	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	10/31/2027	11/29/2027		25	59	30

Alternative 2 Overlapping Noise Levels at NR6 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	71
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	71
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	71
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	71
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	71
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	59

Alternative 2 Overlapping Noise Levels at NR6 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	11/30/2027	1/7/2028	34	58	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/8/2028	1/22/2028	13	78	30
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/23/2028	1/31/2028	7	78	30
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/1/2028	2/25/2028	22	78	30

Alternative 2 Overlapping Noise Levels at NR6 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	58
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	78
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	78
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	78

Alternative 2 Overlapping Noise Levels at NR6 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/26/2028	2/28/2028	2	78	30

Alternative 2 Overlapping Noise Levels at NR6 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	78

Alternative 2 Overlapping Noise Levels at NR6 with MM NOI-1	
Min sound level	45
Max sound level	78
Project days	607
Days above 55 dBA	270
Percentage of days above 55 DBA	44%

Alternative 4 Activities sound Levels at NR1						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site development	5/1/26	6/1/26	3545	55		
Collinsville Substation: Below-grade	7/14/26	1/14/27	3545	57		
Collinsville Substation: abovegrade	1/2/27	2/11/28	3545	53		
230 kV overhead: access road	5/1/27	5/19/27	3940	48		
2310kV overhead:structure foundation installation	5/20/27	6/15/27	3940	50		
232 kV overhead:structure installation	6/16/27	7/15/27	3940	47		
230 kV Conductor installation (with helicopter)	7/16/27	8/15/27	3940	61		
230 kV Conductor installation (without helicopter)	7/16/27	8/15/27	3940	55		
230 kV submarine segment	7/1/27	10/31/27	2750	63		10
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	3090	51		
Northern Transition Approach	6/15/27	11/30/27	3890	40		10
500 kV interconnection: structure foundation installation	5/17/27	8/25/27	4025	51		
500 kV interconnection: structure installation (with helicopter)	7/29/27	9/23/27	4025	66		
500 kV interconnection: structure installation (without helicopter)	7/29/27	9/23/27	4025	46		
500 kV interconnection:conductor installation (with helicopter)	9/24/27	11/19/27	4025	60		
500 kV interconnection:conductor installation (without helicopter)	9/24/27	11/19/27	4025	48		
12 kV distribution	6/1/26	8/1/26	2351	57		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	3545	50		

Alternative 4 Activities sound Levels at NR1			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	55	48	56
Collinsville Substation: Below-grade	57	48	57
Collinsville Substation: abovegrade	53	48	54
230 kV overhead: access road	48	48	51
2310kV overhead:structure foundation installation	50	48	52
232 kV overhead:structure installation	47	48	50
230 kV Conductor installation (with helicopter)	61	48	61
230 kV Conductor installation (without helicopter)	55	48	56
230 kV submarine segment	53	48	54
Collinsville Substation: Site and ROW restoration	51	48	53
Northern Transition Approach	30	48	48
500 kV interconnection: structure foundation installation	51	48	53
500 kV interconnection: structure installation (with helicopter)	66	48	66
500 kV interconnection: structure installation (without helicopter)	46	48	50
500 kV interconnection:conductor installation (with helicopter)	60	48	60
500 kV interconnection:conductor installation (without helicopter)	48	48	51
12 kV distribution	57	48	57
PG&E IT Work at Collinsville Substation	50	48	52

Alternative 4 Activities sound Levels at NR1 with MM NOI-1						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site development	5/1/26	6/1/26	3545	55	10	
Colinsville Substation: Below-grade	7/14/26	1/14/27	3545	57	10	
Collinsville Substation: abovegrade	1/2/27	2/11/28	3545	53	10	
230 kV overhead: access road	5/1/27	5/19/27	3940	48		
2310kV overhead:structure foundation installation	5/20/27	6/15/27	3940	50		
232 kV overhead:structure installation	6/16/27	7/15/27	3940	47		
230 kV Conductor installation (with helicopter)	7/16/27	8/15/27	3940	61		
230 kV Conductor installation (without helicopter)	7/16/27	8/15/27	3940	51		
230 kV submarine segment	7/1/27	10/31/27	2750	63	10	
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	3090	51		
Norhtern Transition Apporach	6/15/27	11/30/27	3890	46	10	
500 kV interconnection: structure foundation installation	5/17/27	8/25/27	4025	51		
500 kV interconnection: structure installation (with helicopter)	7/29/27	9/23/27	4025	66		
500 kV interconnection: structure installation (without helicopter)	7/29/27	9/23/27	4025	46		
500 kV interconnection:conductor installation (with helicopter)	9/24/27	11/19/27	4025	60		
500 kV interconnection:conductor installation (without helicopter)	9/24/27	11/19/27	4025	48		
12 kV distribution	6/1/26	8/1/26	2351	57		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	3545	50	10	

Alternative 4 Activities sound Levels at NR1 with MM NOI-1			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	45	48	50
Collinsville Substation: Below-grade	47	48	50
Collinsville Substation: abovegrade	43	48	49
230 kV overhead: access road	48	48	51
2310kV overhead:structure foundation installation	50	48	52
232 kV overhead:structure installation	47	48	50
230 kV Conductor installation (with helicopter)	61	48	61
230 kV Conductor installation (without helicopter)	51	48	53
230 kV submarine segment	53	48	54
Collinsville Substation: Site and ROW restoration	51	48	53
Northern Transition Approach	36	48	48
500 kV interconnection: structure foundation installation	51	48	53
500 kV interconnection: structure installation (with helicopter)	66	48	66
500 kV interconnection: structure installation (without helicopter)	46	48	50
500 kV interconnection:conductor installation (with helicopter)	60	48	60
500 kV interconnection:conductor installation (without helicopter)	48	48	51
12 kV distribution	57	48	57
PG&E IT Work at Collinsville Substation	40	48	49

Alternative 4 Activities sound Levels at NR2						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site development	5/1/26	6/1/26	3787	55		
Collinsville Substation: Below-grade	7/14/26	1/14/27	3787	56		
Collinsville Substation: abovegrade	1/2/27	2/11/28	3787	56		
230 kV overhead: access road	5/1/27	5/19/27	4990	46		
2310kV overhead:structure foundation installation	5/20/27	6/15/27	4990	48		
232 kV overhead:structure installation	6/16/27	7/15/27	4990	44		
230 kV Conductor installation (with helicopter)	7/16/27	8/15/27	4990	59		
230 kV Conductor installation (without helicopter)	7/16/27	8/15/27	4990	53		
230 kV submarine segment	7/1/27	10/31/27	3965	60		10
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	3200	50		
Norhtern Transition Apporach	6/15/27	11/30/27	6015	44		10
500 kV interconnection: structure foundation installation	5/17/27	8/25/27	4070	51		
500 kV interconnection: structure installation (with helicopter)	7/29/27	9/23/27	4070	66		
500 kV interconnection: structure installation (without helicopter)	7/29/27	9/23/27	4070	46		
500 kV interconnection:conductor installation (with helicopter)	9/24/27	11/19/27	4070	60		
500 kV interconnection:conductor installation (without helicopter)	9/24/27	11/19/27	4070	48		
12 kV distribution	6/1/26	8/1/26	1331	62		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	3787	3787		

Alternative 4 Activities sound Levels at NR2			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	55	48	56
Collinsville Substation: Below-grade	56	48	57
Collinsville Substation: abovegrade	56	48	57
230 kV overhead: access road	46	48	50
2310kV overhead:structure foundation installation	48	48	51
232 kV overhead:structure installation	44	48	50
230 kV Conductor installation (with helicopter)	59	48	59
230 kV Conductor installation (without helicopter)	53	48	54
230 kV submarine segment	50	48	52
Collinsville Substation: Site and ROW restoration	50	48	52
Northern Transition Approach	34	48	48
500 kV interconnection: structure foundation installation	51	48	53
500 kV interconnection: structure installation (with helicopter)	66	48	66
500 kV interconnection: structure installation (without helicopter)	46	48	50
500 kV interconnection:conductor installation (with helicopter)	60	48	60
500 kV interconnection:conductor installation (without helicopter)	48	48	51
12 kV distribution	62	48	62
PG&E IT Work at Collinsville Substation	50	48	52

Alternative 4 Activities sound Levels at NR2 with MM NOI-1						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site developent	5/1/26	6/1/26	3787	55	10	
Colinsville Substation: Below-grade	7/14/26	1/14/27	3787	56	10	
Collinsville Substation: abovegrade	1/2/27	2/11/28	3787	56	10	
230 kV overhead: access road	5/1/27	5/19/27	4990	46		
2310kV overhead:structure foundation installation	5/20/27	6/15/27	4990	48		
232 kV overhead:structure installation	6/16/27	7/15/27	4990	44		
230 kV Conductor installation (with helicopter)	7/16/27	8/15/27	4990	58		
230 kV Conductor installation (without helicopter)	7/16/27	8/15/27	4990	49		
230 kV submarine segment	7/1/27	10/31/27	3965	60	10	
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	3200	50		
Norhtern Transition Apporach	6/15/27	11/30/27	6015	48	10	
500 kV interconnection: structure foundation installation	5/17/27	8/25/27	4070	51		
500 kV interconnection: structure installation (with helicopter)	7/29/27	9/23/27	4070	66		
500 kV interconnection: structure installation (without helicopter)	7/29/27	9/23/27	4070	46		
500 kV interconnection:conductor installation (with helicopter)	9/24/27	11/19/27	4070	60		
500 kV interconnection:conductor installation (without helicopter)	9/24/27	11/19/27	4070	48		
12 kV distribution	6/1/26	8/1/26	1331	62		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	3787	50	10	

Alternative 4 Activities sound Levels at NR2 with MM NOI-1			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	45	48	50
Collinsville Substation: Below-grade	46	48	50
Collinsville Substation: abovegrade	46	48	50
230 kV overhead: access road	46	48	50
2310kV overhead:structure foundation installation	48	48	51
232 kV overhead:structure installation	44	48	50
230 kV Conductor installation (with helicopter)	58	48	59
230 kV Conductor installation (without helicopter)	49	48	51
230 kV submarine segment	50	48	52
Collinsville Substation: Site and ROW restoration	50	48	52
Northern Transition Approach	38	48	48
500 kV interconnection: structure foundation installation	51	48	53
500 kV interconnection: structure installation (with helicopter)	66	48	66
500 kV interconnection: structure installation (without helicopter)	46	48	50
500 kV interconnection:conductor installation (with helicopter)	60	48	60
500 kV interconnection:conductor installation (without helicopter)	48	48	51
12 kV distribution	62	48	62
PG&E IT Work at Collinsville Substation	40	48	49

Alternative 4 Overlapping Noise Levels at NR1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Existing daytime ambient sound level (NM2) (Leq dBA)		
				Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: Site development	5/1/2026	6/1/2026	26	55	48	
12 kV distribution	6/1/2026	7/14/2026	37	57	48	
Colinsville Substation: Below-grade + 12 kV distribution	7/14/2026	8/1/2026	16	60	48	
Colinsville Substation: Below-grade	8/1/2026	12/31/2026	132	57	48	
Colinsville Substation: Below-grade + PG&E IT Work	1/1/2027	1/2/2027	2	53	48	
Colinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	1/2/2027	1/14/2027	10	59	48	
Collinsville Substation: abovegrade + PG&E IT Work	1/14/2027	5/1/2027	92	55	48	
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/17/2027	13	56	48	
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027	2	57	48	
Collinsville Substation: abovegrade + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/19/2027	5/20/2027	1	57	48	
Collinsville Substation: abovegrade + 230 kV overhead:structure foundation installation + 500 kV interconnection + PG&E IT Work: structure foundation installation	5/20/2027	6/15/2027	22	57	48	
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	6/15/2027	6/16/2027	1	57	48	

Alternative 4 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	56
12 kV distribution	57
Collinsville Substation: Below-grade + 12 kV distribution	60
Collinsville Substation: Below-grade	57
Collinsville Substation: Below-grade + PG&E IT Work	54
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	59
Collinsville Substation: abovegrade + PG&E IT Work	56
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	57
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	58
Collinsville Substation: abovegrade + 500 kV interconnection: structure foundation installation + PG&E IT Work	57
Collinsville Substation: abovegrade + 230 kV overhead:structure foundation installation + 500 kV interconnection + PG&E IT Work: structure foundation installation	58
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	57

Alternative 4 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + 232 kV overhead:structure installation + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	6/16/2027	7/1/2027	13	57	48
Collinsville Substation: abovegrade + 232 kV overhead:structure installation + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	7/1/2027	7/15/2027	12	59	48
Collinsville Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	7/15/2027	7/16/2027	1	58	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	7/16/2027	7/29/2027	11	63	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	7/29/2027	8/15/2027	15	68	48

Alternative 4 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 232 kV overhead:structure installation + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	58
Collinsvile Substation: abovegrade + 232 kV overhead:structure installation + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	59
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	59
Collinsvile Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	63
Collinsvile Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	68

Alternative 4 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	8/15/2027	8/25/2027	8	67	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	8/25/2027	8/31/2027	25	67	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach	9/1/2027	9/23/2027	20	66	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach	9/23/2027	9/24/2027	1	56	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: conductor installation (with helicopter)	9/24/2027	10/31/2027	32	62	48
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: conductor installation (with helicopter)	10/31/2027	11/19/2027	16	61	48
Collinsville Substation: abovegrade + Northern Transition Approach	11/19/2027	11/30/2027	9	53	48
Collinsville Substation: abovegrade	11/30/2027	2/1/2028	54	53	48

Alternative 4 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	67
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	67
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach	66
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach	57
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection:conductor installation (with helicopter)	62
Collinsvile Substation: abovegrade + Norhtern Transition Apporach + 500 kV interconnection:conductor installation (with helicopter)	61
Collinsvile Substation: abovegrade + Norhtern Transition Apporach	54
Collinsvile Substation: abovegrade	54

Alternative 4 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration	2/1/2028	2/11/2028	9	55	48
Collinsville Substation: Site and ROW restoration	2/11/2028	7/17/2028	134	50.8	48

Alternative 4 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration	56
Collinsville Substation: Site and ROW restoration	52.60

Alternative 4 Overlapping Noise Levels at NR1	
Min noise level	52.6
Max noise level	67.7
Project days	714
Days above 55 dBA	515
Percentage of days above 55 dBA	72%

Alternative 2 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Site development	5/1/2026	6/1/2026		26	48
12 kV distribution	6/1/2026	7/14/2026		37	48
Colinsville Substation: Below-grade + 12 kV distribution	7/14/2026	8/1/2026		16	48
Colinsville Substation: Below-grade	8/1/2026	12/31/2026		132	48
Colinsville Substation: Below-grade + PG&E IT Work	1/1/2027	1/2/2027		2	48
Colinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	1/2/2027	1/14/2027		10	48
Collinsville Substation: abovegrade + PG&E IT Work	1/14/2027	5/1/2027		92	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/17/2027		13	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027		2	48
Collinsville Substation: abovegrade + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/19/2027	5/20/2027		1	48
Collinsville Substation: abovegrade + 230 kV overhead: structure foundation installation + 500 kV interconnection + PG&E IT Work: structure foundation installation	5/20/2027	6/15/2027		22	48
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	6/15/2027	6/16/2027		1	48

Alternative 2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	56
12 kV distribution	62
Collinsville Substation: Below-grade + 12 kV distribution	63
Collinsville Substation: Below-grade	57
Collinsville Substation: Below-grade + PG&E IT Work	57
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	60
Collinsville Substation: abovegrade + PG&E IT Work	58
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	58
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	59
Collinsville Substation: abovegrade + 500 kV interconnection: structure foundation installation + PG&E IT Work	58
Collinsville Substation: abovegrade + 230 kV overhead:structure foundation installation + 500 kV interconnection + PG&E IT Work: structure foundation installation	59
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	58

Alternative 2 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + 232 kV overhead:structure installation + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	6/16/2027	7/1/2027	13	58	48
Collinsville Substation: abovegrade + 232 kV overhead:structure installation + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	7/1/2027	7/15/2027	12	59	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	7/15/2027	7/16/2027	1	59	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	7/16/2027	7/29/2027	11	62	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	7/29/2027	8/15/2027	15	67	48

Alternative 2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 232 kV overhead:structure installation + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	59
Collinsvile Substation: abovegrade + 232 kV overhead:structure installation + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	59
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	59
Collinsvile Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	62
Collinsvile Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	67

Alternative 2 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	8/15/2027	8/25/2027	8	67	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	8/25/2027	8/31/2027	25	66	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach	9/1/2027	9/23/2027	20	66	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach	9/23/2027	9/24/2027	1	57	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: conductor installation (with helicopter)	9/24/2027	10/31/2027	32	62	48
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: conductor installation (with helicopter)	10/31/2027	11/19/2027	16	61	48
Collinsville Substation: abovegrade + Northern Transition Approach	11/19/2027	11/30/2027	9	56	48
Collinsville Substation: abovegrade	11/30/2027	2/1/2028	54	56	48

Alternative 2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	67
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	67
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach	66
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach	58
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection:conductor installation (with helicopter)	62
Collinsvile Substation: abovegrade + Norhtern Transition Apporach + 500 kV interconnection:conductor installation (with helicopter)	62
Collinsvile Substation: abovegrade + Norhtern Transition Apporach	57
Collinsvile Substation: abovegrade	57

Alternative 2 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration	2/1/2028	2/11/2028	9	57	48
Collinsville Substation: Site and ROW restoration	2/11/28	7/17/28	134	50	48

Alternative 2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration	58
Collinsville Substation: Site and ROW restoration	52

Alternative 2 Overlapping Noise Levels at NR1	
Min noise level	52
Max noise level	67.4
Project days	714
Days above 55 dBA	580
Percentage of days above 55 dBA	81%

Alternative 4 Overlapping Noise Levels at NR1 with MM NOI-1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: Site development	5/1/2026	6/1/2026		26	45	48
12 kV distribution	6/1/2026	7/14/2026		37	57	48
Collinsville Substation: Below-grade + 12 kV distribution	7/14/2026	8/1/2026		16	57	48
Collinsville Substation: Below-grade	8/1/2026	12/31/2026		132	47	48
Collinsville Substation: Below-grade + PG&E IT Work	1/1/2027	1/2/2027		2	43	48
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	1/2/2027	1/14/2027		10	49	48
Collinsville Substation: abovegrade + PG&E IT Work	1/14/2027	5/1/2027		92	45	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/17/2027		13	50	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027		2	54	48
Collinsville Substation: abovegrade + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/19/2027	5/20/2027		1	52	48
Collinsville Substation: abovegrade + 230 kV overhead:structure foundation installation + 500 kV interconnection + PG&E IT Work: structure foundation installation	5/20/2027	6/15/2027		22	54	48

Alternative 4 Overlapping Noise Levels at NR1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	50
12 kV distribution	57
Collinsville Substation: Below-grade + 12 kV distribution	58
Collinsville Substation: Below-grade	50
Collinsville Substation: Below-grade + PG&E IT Work	49
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	52
Collinsville Substation: abovegrade + PG&E IT Work	50
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	52
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	55
Collinsville Substation: abovegrade + 500 kV interconnection: structure foundation installation + PG&E IT Work	54
Collinsville Substation: abovegrade + 230 kV overhead:structure foundation installation + 500 kV interconnection + PG&E IT Work: structure foundation installation	55

Alternative 4 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	6/15/2027	6/16/2027	1	52	48
Collinsville Substation: abovegrade + 232 kV overhead:structure installation + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	6/16/2027	7/1/2027	13	53	48
Collinsville Substation: abovegrade + 232 kV overhead:structure installation + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	7/1/2027	7/15/2027	12	56	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	7/15/2027	7/16/2027	1	56	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	7/16/2027	7/29/2027	11	62	48

Alternative 4 Overlapping Noise Levels at NR1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	54
Collinsvile Substation: abovegrade + 232 kV overhead:structure installation + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	54
Collinsvile Substation: abovegrade + 232 kV overhead:structure installation + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	57
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	56
Collinsvile Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + PG&E IT Work	62

Alternative 4 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping constuction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	7/29/2027	8/15/2027	15	67	48
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	8/15/2027	8/25/2027	8	66	48
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	8/25/2027	8/31/2027	25	66	48
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach	9/1/2027	9/23/2027	20	66	48
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach	9/23/2027	9/24/2027	1	54	48

Alternative 4 Overlapping Noise Levels at NR1 with MM NOI-1	
Overlapping constuction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	67
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	66
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	66
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach	66
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach	55

Alternative 4 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	9/24/2027	10/31/2027		32	48
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	10/31/2027	11/19/2027		16	48
Collinsville Substation: abovegrade + Northern Transition Approach	11/19/2027	11/30/2027		9	48
Collinsville Substation: abovegrade	11/30/2027	2/1/2028		54	48
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration	2/1/2028	2/11/2028		9	48
Collinsville Substation: Site and ROW restoration	2/11/28	7/17/28		134	48

Alternative 4 Overlapping Noise Levels at NR1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	61
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	60
Collinsville Substation: abovegrade + Northern Transition Approach	50
Collinsville Substation: abovegrade	49
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration	53
Collinsville Substation: Site and ROW restoration	53

Alternative 4 Overlapping Noise Levels at NR1 with MM NOI-1	
Min sound level	49
Max sound level	67
Project days	714
Days above 55 dBA	193
Percentage of days above 55 DBA	27%

Alternative 4 Overlapping Noise Levels at NR2 with MM NOI-1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)	
Collinsville Substation: Site development	5/1/2026	6/1/2026	26	45	48	
12 kV distribution	6/1/2026	7/14/2026	37	62	48	
Collinsville Substation: Below-grade + 12 kV distribution	7/14/2026	8/1/2026	16	62	48	
Collinsville Substation: Below-grade	8/1/2026	12/31/2026	132	46	48	
Collinsville Substation: Below-grade + PG&E IT Work	1/1/2027	1/2/2027	2	46	48	
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	1/2/2027	1/14/2027	10	53	48	
Collinsville Substation: abovegrade + PG&E IT Work	1/14/2027	5/1/2027	92	51	48	
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/17/2027	13	52	48	
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027	2	55	48	
Collinsville Substation: abovegrade + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/19/2027	5/20/2027	1	54	48	
Collinsville Substation: abovegrade + 230 kV overhead: structure foundation installation + 500 kV interconnection + PG&E IT Work: structure foundation installation	5/20/2027	6/15/2027	22	55	48	

Alternative 4 Overlapping Noise Levels at NR2 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	50
12 kV distribution	62
Collinsville Substation: Below-grade + 12 kV distribution	62
Collinsville Substation: Below-grade	50
Collinsville Substation: Below-grade + PG&E IT Work	50
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	54
Collinsville Substation: abovegrade + PG&E IT Work	53
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	54
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	56
Collinsville Substation: abovegrade + 500 kV interconnection: structure foundation installation + PG&E IT Work	55
Collinsville Substation: abovegrade + 230 kV overhead: structure foundation installation + 500 kV interconnection + PG&E IT Work: structure foundation installation	56

Alternative 4 Overlapping Noise Levels at NR2 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	6/15/2027	6/16/2027	1	54	48
Collinsville Substation: abovegrade + 232 kV overhead:structure installation + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	6/16/2027	7/1/2027	13	55	48
Collinsville Substation: abovegrade + 232 kV overhead:structure installation + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	7/1/2027	7/15/2027	12	56	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	7/15/2027	7/16/2027	1	56	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	7/16/2027	7/29/2027	11	60	48

Alternative 4 Overlapping Noise Levels at NR2 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	55
Collinsville Substation: abovegrade + 232 kV overhead:structure installation + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	56
Collinsville Substation: abovegrade + 232 kV overhead:structure installation + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	57
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	56
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + PG&E IT Work	61

Alternative 4 Overlapping Noise Levels at NR2 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	7/29/2027	8/15/2027	15	67	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	8/15/2027	8/25/2027	8	66	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	8/25/2027	8/31/2027	25	66	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach	9/1/2027	9/23/2027	20	66	48
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach	9/23/2027	9/24/2027	1	52	48

Alternative 4 Overlapping Noise Levels at NR2 with MM NOI-1	
Overlapping constuction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV Conductor installation (with helicopter) + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	67
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure foundation installation + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	66
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach + 500 kV interconnection: structure installation (with helicopter) + PG&E IT Work	66
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach	66
Collinsvile Substation: abovegrade + Submarine cable + Norhtern Transition Apporach	53

Alternative 4 Overlapping Noise Levels at NR2 with MM NOI-1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)	
Collinsville Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	9/24/2027	10/31/2027		32	61	48
Collinsville Substation: abovegrade + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	10/31/2027	11/19/2027		16	60	48
Collinsville Substation: abovegrade + Northern Transition Approach	11/19/2027	11/30/2027		9	47	48
Collinsville Substation: abovegrade	11/30/2027	2/1/2028		54	46	48
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration	2/1/2028	2/11/2028		9	52	48
Collinsville Substation: Site and ROW restoration	2/11/2028	7/17/2028		134	50	48

Alternative 4 Overlapping Noise Levels at NR2 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + Submarine cable + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	61
Collinsvile Substation: abovegrade + Northern Transition Approach + 500 kV interconnection:conductor installation (with helicopter)	60
Collinsvile Substation: abovegrade + Northern Transition Approach	50
Collinsvile Substation: abovegrade	50
Collinsvile Substation: abovegrade + Collinsville Substation: Site and ROW restoration	53
Collinsville Substation: Site and ROW restoration	52

Alternative 4 Overlapping Noise Levels at NR2 with MM NOI-1	
Min noise level	50
Max noise level	67
Project days	714
Days above 55 dBA	230
Percentage of days above DBA	32%

Alternative 6a Activities sound Levels at NR1						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site development	5/1/26	8/1/26	3545	55		
Collinsville Substation: Below-grade	7/14/26	1/14/27	3545	57		
Collinsville Substation: abovegrade	1/2/27	2/11/28	3545	53		
230 kV submarine cable installation	7/1/27	10/31/27	2750	63	10	
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	3545	51		
230 kV underground north	6/1/27	8/23/27	3460	57	10	
Northern Transition Approach	6/15/27	11/30/27	3820	48	10	
500 kV interconnection: structure foundation installation	6/1/27	7/28/27	3460	51		
500 kV interconnection: structure installation (with helicopter)	7/29/27	9/23/27	4025	66		
500 kV interconnection: structure installation (without helicopter)	9/24/27	11/19/27	4025	46		
500 kV interconnection:conductor installation (with helicopter)	7/29/27	9/23/27	4025	60		
500 kV interconnection:conductor installation (without helicopter)	9/24/27	9/24/27	4025	48		
12 kV distribution	6/1/26	8/1/26	2351	57		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	3545	40		

Alternative 6a Activities sound Levels at NR1			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	55	48	56
Colinsville Substation: Below-grade	57	48	57
Collinsville Substation: abovegrade	53	48	54
230 kV submarine cable installation	53	48	54
Collinsville Substation: Site and ROW restoration	51	48	53
230 kV underground north	47	48	51
Northern Transition Approach	38	48	48
500 kV interconnection: structure foundation installation	51	48	53
500 kV interconnection: structure installation (with helicopter)	66	48	66
500 kV interconnection: structure installation (without helicopter)	46	48	50
500 kV interconnection:conductor installation (with helicopter)	60	48	60
500 kV interconnection:conductor installation (without helicopter)	48	48	51
12 kV distribution	57	48	57
PG&E IT Work at Collinsville Substation	40	48	49

Alternative 6a Activities sound Levels at NR1 with MM NOI-1						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site developent	5/1/26	8/1/26	3545	55	10	
Colinsville Substation: Below-grade	7/14/26	1/14/27	3545	57	10	
Collinsvile Substation: abovegrade	1/2/27	2/11/28	3545	53	10	
230 kV submarine cable installation	7/1/27	10/31/27	2750	63	10	
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	3545	51		
230 kV underground north	6/1/27	8/23/27	3460	57	10	
Northern Transition Approach	6/15/27	11/30/27	3820	48	10	
500 kV interconnection: structure foundation installation	6/1/27	7/28/27	3460	51		
500 kV interconnection: structure installation (with helicopter)	7/29/27	9/23/27	4025	66		
500 kV interconnection: structure installation (without helicopter)	9/24/27	11/19/27	4025	46		
500 kV interconnection:conductor installation (with helicopter)	7/29/27	9/23/27	4025	60		
500 kV interconnection:conductor installation (without helicopter)	9/24/27	9/24/27	4025	48		
12 kV distribution	6/1/26	8/1/26	2351	57		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	3545	40	10	

Alternative 6a Activities sound Levels at NR1 with MM NOI-1			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	45	48	50
Colinsville Substation: Below-grade	47	48	50
Collinsville Substation: abovegrade	43	48	49
230 kV submarine cable installation	53	48	54
Collinsville Substation: Site and ROW restoration	51	48	53
230 kV underground north	47	48	51
Northern Transition Approach	38	48	48
500 kV interconnection: structure foundation installation	51	48	53
500 kV interconnection: structure installation (with helicopter)	66	48	66
500 kV interconnection: structure installation (without helicopter)	46	48	50
500 kV interconnection:conductor installation (with helicopter)	60	48	60
500 kV interconnection:conductor installation (without helicopter)	48	48	51
12 kV distribution	57	48	57
PG&E IT Work at Collinsville Substation	30	48	48

Alternative 6a Activities sound Levels at NR2						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site development	5/1/26	8/1/26	3787	55		
Collinsville Substation: Below-grade	7/14/26	1/14/27	3787	56		
Collinsville Substation: abovegrade	1/2/27	2/11/28	3787	53		
230 kV submarine cable installation	7/1/27	10/31/27	4107	60	10	
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	3787	50		
230 kV underground north	6/1/27	8/23/27	4010	56		
Northern Transition Approach	6/15/27	11/30/27	4650	46	10	
500 kV interconnection: structure foundation installation	6/1/27	7/28/27	4070	51		
500 kV interconnection: structure installation (with helicopter)	7/29/27	9/23/27	4070	66		
500 kV interconnection: structure installation (without helicopter)	9/24/27	11/19/27	4070	46		
500 kV interconnection:conductor installation (with helicopter)	7/29/27	9/23/27	4070	60		
500 kV interconnection:conductor installation (without helicopter)	9/24/27	9/24/27	4070	48		
12 kV distribution	6/1/26	8/1/26	1331	62		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	3787	50		

Alternative 6a Activities sound Levels at NR2			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site development	55	48	56
Colinsville Substation: Below-grade	56	48	57
Collinsville Substation: abovegrade	53	48	54
230 kV submarine cable installation	50	48	
Collinsville Substation: Site and ROW restoration	50	48	52
230 kV underground north	56	48	56
Northern Transition Approach	36	48	48
500 kV interconnection: structure foundation installation	51	48	53
500 kV interconnection: structure installation (with helicopter)	66	48	66
500 kV interconnection: structure installation (without helicopter)	46	48	50
500 kV interconnection:conductor installation (with helicopter)	60	48	60
500 kV interconnection:conductor installation (without helicopter)	48	48	51
12 kV distribution	62	48	62
PG&E IT Work at Collinsville Substation	43	48	49

Alternative 6a Activities sound Levels at NR2 with MM NOI-1						
Component and activity	Start date	End date	Distance to Component (feet)	Project sound (Leq dBA)	Insertion loss (dBA)	
Collinsville Substation: Site developent	5/1/26	8/1/26	3545	55	10	
Colinsville Substation: Below-grade	7/14/26	1/14/27	3545	57	10	
Collinsvile Substation: abovegrade	1/2/27	2/11/28	3545	53	10	
230 kV submarine cable installation	7/1/27	10/31/27	2750	63	10	
Collinsville Substation: Site and ROW restoration	2/1/28	7/17/28	3545	51		
230 kV underground north	6/1/27	8/23/27	3460	57	10	
Northern Transition Approach	6/15/27	11/30/27	3820	48	10	
500 kV interconnection: structure foundation installation	6/1/27	7/28/27	3460	51		
500 kV interconnection: structure installation (with helicopter)	7/29/27	9/23/27	4025	66		
500 kV interconnection: structure installation (without helicopter)	9/24/27	11/19/27	4025	46		
500 kV interconnection:conductor installation (with helicopter)	7/29/27	9/23/27	4025	60		
500 kV interconnection:conductor installation (without helicopter)	9/24/27	9/24/27	4025	48		
12 kV distribution	6/1/26	8/1/26	2351	57		
PG&E IT Work at Collinsville Substation	1/1/27	8/31/27	3545	40	10	

Alternative 6a Activities sound Levels at NR2 with MM NOI-1			
Component and activity	Project sound after insertion loss (Leq dBA)	Existing ambient daytime sound levels (NM2) (Leq dBA)	Combined project activity and existing ambient sound levels (Leq dBA)
Collinsville Substation: Site developent	45	48	50
Colinsville Substation: Below-grade	46	48	50
Collinsville Substation: abovegrade	43	48	49
230 kV submarine cable installation	50	48	
Collinsville Substation: Site and ROW restoration	50	48	52
230 kV underground north	46	48	50
Northern Transition Approach	36	48	48
500 kV interconnection: structure foundation installation	51	48	53
500 kV interconnection: structure installation (with helicopter)	66	48	66
500 kV interconnection: structure installation (without helicopter)	46	48	50
500 kV interconnection:conductor installation (with helicopter)	60	48	60
500 kV interconnection:conductor installation (without helicopter)	48	48	51
12 kV distribution	62	48	62
PG&E IT Work at Collinsville Substation	43	48	49

Alternative 6a Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq	Existing daytime ambient
				dBA)	sound level (NM2) (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026		26	48
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/13/2026		37	48
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	7/14/2026	7/31/2026		16	48
Collinsville Substation: Below-grade	8/1/2026	12/31/2026		131	48
Collinsville Substation: Below-grade + PG&E IT Work	1/1/2027	1/1/2027		1	48
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	1/2/2027	1/13/2027		10	48
Collinsville Substation: abovegrade + PG&E IT Work	1/14/2027	4/30/2027		92	48
Collinsville Substation: abovegrade, 230 kV underground north, 500 kV interconnection: structure foundation installation + PG&E IT Work	6/1/2027	6/14/2027		12	48
Collinsville Substation: abovegrade, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	6/15/2027	6/30/2027		14	48
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	7/1/2027	7/27/2027		23	48

Alternative 6a Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	56
Collinsville Substation: Site development + 12 kV distribution	59
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	61
Collinsville Substation: Below-grade	57
Collinsville Substation: Below-grade + PG&E IT Work	57
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	59
Collinsville Substation: abovegrade + PG&E IT Work	55
Collinsville Substation: abovegrade, 230 kV underground north, 500 kV interconnection: structure foundation installation + PG&E IT Work	57
Collinsville Substation: abovegrade, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	57
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	58

Alternative 6a Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach + PG&E IT Work	7/28/2027	7/28/2027	1	57	48
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	7/29/2027	8/22/2027	21	67	48
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	8/23/2027	8/31/2027	8	67	48
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter)	9/1/2027	9/22/2027	19	67	48
Collinsville Substation: abovegrade, 230 kV submarine cable installation, Northern Transition Approach	9/23/2027	10/30/2027	33	56	48
Collinsville Substation: abovegrade, Northern Transition Approach	10/31/2027	11/29/2027	25	53	48
Collinsville Substation: abovegrade	11/30/2027	1/31/2028	54	53	48

Alternative 6a Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach + PG&E IT Work	57
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	67
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	67
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter)	67
Collinsville Substation: abovegrade, 230 kV submarine cable installation, Northern Transition Approach	57
Collinsville Substation: abovegrade, Northern Transition Approach	55
Collinsville Substation: abovegrade	54

Alternative 6a Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade, Collinsville Substation: Site and ROW restoration	2/1/2028	2/10/2028	9	55	48
Collinsville Substation: Site and ROW restoration	2/11/2028	7/16/2028	134	51	48

Alternative 6a Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade, Collinsville Substation: Site and ROW restoration	56
Collinsville Substation: Site and ROW restoration	53

Alternative 6a Overlapping Noise Levels at NR1	
Minimum noise level	53
Maximum noise level	67
Project days	666
Days above 55 dBA	361
Percentage of days above 55 dBA	54%

Alternative 6a Overlapping Noise Levels at NR2					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026		26	48
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/13/2026		37	48
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	7/14/2026	7/31/2026		16	48
Collinsville Substation: Below-grade	8/1/2026	12/31/2026		131	48
Collinsville Substation: Below-grade + PG&E IT Work	1/1/2027	1/1/2027		1	48
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	1/2/2027	1/13/2027		10	48
Collinsville Substation: abovegrade + PG&E IT Work	1/14/2027	4/30/2027		92	48
Collinsville Substation: abovegrade, 230 kV underground north, 500 kV interconnection: structure foundation installation + PG&E IT Work	6/1/2027	6/14/2027		12	48
Collinsville Substation: abovegrade, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	6/15/2027	6/30/2027		14	48
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	7/1/2027	7/27/2027		23	48

Alternative 6a Overlapping Noise Levels at NR2	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	56
Collinsville Substation: Site development + 12 kV distribution	63
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	64
Collinsville Substation: Below-grade	57
Collinsville Substation: Below-grade + PG&E IT Work	57
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	58
Collinsville Substation: abovegrade + PG&E IT Work	54
Collinsville Substation: abovegrade, 230 kV underground north, 500 kV interconnection: structure foundation installation + PG&E IT Work	59
Collinsville Substation: abovegrade, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	59
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	59

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach + PG&E IT Work	7/28/2027	7/28/2027	1	58	48
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	7/29/2027	8/22/2027	21	67	48
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	8/23/2027	8/31/2027	8	67	48
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter)	9/1/2027	9/22/2027	19	67	48
Collinsville Substation: abovegrade, 230 kV submarine cable installation, Northern Transition Approach	9/23/2027	10/30/2027	33	55	48
Collinsville Substation: abovegrade, Northern Transition Approach	10/31/2027	11/29/2027	25	53	48
Collinsville Substation: abovegrade	11/30/2027	1/31/2028	54	53	48
Collinsville Substation: abovegrade, Collinsville Substation: Site and ROW restoration	2/1/2028	2/10/2028	9	55	48

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach + PG&E IT Work	59
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	67
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	67
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter)	67
Collinsville Substation: abovegrade, 230 kV submarine cable installation, Northern Transition Approach	56
Collinsville Substation: abovegrade, Northern Transition Approach	54
Collinsville Substation: abovegrade	54
Collinsville Substation: abovegrade, Collinsville Substation: Site and ROW restoration	56

Alternative 6a Overlapping Noise Levels at NR2

Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Site and ROW restoration	2/11/2028	7/16/2028	134	50	48

Alternative 6a Overlapping Noise Levels at NR2

Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site and ROW restoration	52

Alternative 6a Overlapping Noise Levels at NR2

Minimum noise level	52
Maximum noise level	67
Project days	666
Days above 55 dBA	361
Percentage of days above 55 dBA	54%

Alternative 6a Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026	26	45	48
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/13/2026	37	57	48
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	7/14/2026	7/31/2026	16	58	48
Collinsville Substation: Below-grade	8/1/2026	12/31/2026	131	47	48
Collinsville Substation: Below-grade + PG&E IT Work	1/1/2027	1/1/2027	1	47	48
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	1/2/2027	1/13/2027	10	48	48
Collinsville Substation: abovegrade + PG&E IT Work	1/14/2027	4/30/2027	92	44	48
Collinsville Substation: abovegrade, 230 kV underground north, 500 kV interconnection: structure foundation installation + PG&E IT Work	2027-06-01	2027-06-14	12	53	48
Collinsville Substation: abovegrade, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	2027-06-15	2027-06-30	14	53	48
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	2027-07-01	2027-07-27	23	56	48

Alternative 6a Overlapping Noise Levels at NR1 with MM NOI-1		
Overlapping construction activities	Existing daytime ambient sound level (NM2) (Leq dBA)	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	48	50
Collinsville Substation: Site development + 12 kV distribution	48	58
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	48	58
Collinsville Substation: Below-grade	48	50
Collinsville Substation: Below-grade + PG&E IT Work	48	51
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	48	51
Collinsville Substation: abovegrade + PG&E IT Work	48	49
Collinsville Substation: abovegrade, 230 kV underground north, 500 kV interconnection: structure foundation installation + PG&E IT Work	48	54
Collinsville Substation: abovegrade, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	48	54
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	48	57
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach + PG&E IT Work	48	55

Alternative 6a Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach + PG&E IT Work	2027-07-28	2027-07-28	1	55	48
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	2027-07-29	2027-08-22	21	67	48
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	2027-08-23	8/31/2027	8	67	48
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter)	2027-09-01	2027-09-22	19	67	48
Collinsville Substation: abovegrade, 230 kV submarine cable installation, Northern Transition Approach	9/23/2027	10/30/2027	33	54	48
Collinsville Substation: abovegrade, Northern Transition Approach	10/31/2027	11/29/2027	25	44	48
Collinsville Substation: abovegrade	11/30/2027	1/31/2028	54	43	48

Alternative 6a Overlapping Noise Levels at NR1 with MM NOI-1		
Overlapping construction activities	Existing daytime ambient sound level (NM2) (Leq dBA)	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach + PG&E IT Work	48	55
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	48	67
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	48	67
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter)	48	67
Collinsville Substation: abovegrade, 230 kV submarine cable installation, Northern Transition Approach	48	55
Collinsville Substation: abovegrade, Northern Transition Approach	48	50
Collinsville Substation: abovegrade	48	49

Alternative 6a Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade, Collinsville Substation: Site and ROW restoration	2/1/2028	2/10/2028	9	52	48
Collinsville Substation: Site and ROW restoration	2/11/2028	7/16/2028	134	51	48

Alternative 6a Overlapping Noise Levels at NR1 with MM NOI-1

Overlapping construction activities	Existing daytime ambient sound level (NM2) (Leq dBA)	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade, Collinsville Substation: Site and ROW restoration	48	53
Collinsville Substation: Site and ROW restoration	48	53

Alternative 6a Overlapping Noise Levels at NR1 with MM NOI-1	
Minimum noise level	49
Maximum noise level	67
Project days	666
Days above 55 dBA	124
Percentage of days above 55 dBA	19%

Alternative 6a Overlapping Noise Levels at NR2 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026	26	45	48
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/13/2026	37	62	48
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	7/14/2026	7/31/2026	16	62	48
Collinsville Substation: Below-grade	8/1/2026	12/31/2026	131	46	48
Collinsville Substation: Below-grade + PG&E IT Work	1/1/2027	1/1/2027	1	48	48
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	1/2/2027	1/13/2027	10	49	48
Collinsville Substation: abovegrade + PG&E IT Work	1/14/2027	4/30/2027	92	46	48
Collinsville Substation: abovegrade, 230 kV underground north, 500 kV interconnection: structure foundation installation + PG&E IT Work	6/1/2027	6/14/2027	12	53	48
Collinsville Substation: abovegrade, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	6/15/2027	6/30/2027	14	53	48
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	7/1/2027	7/27/2027	23	55	48

Alternative 6a Overlapping Noise Levels at NR2 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	50
Collinsville Substation: Site development + 12 kV distribution	62
Collinsville Substation: Site development + Collinsville Substation: Below-grade + 12 kV distribution	62
Collinsville Substation: Below-grade	50
Collinsville Substation: Below-grade + PG&E IT Work	51
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	52
Collinsville Substation: abovegrade + PG&E IT Work	50
Collinsville Substation: abovegrade, 230 kV underground north, 500 kV interconnection: structure foundation installation + PG&E IT Work	54
Collinsville Substation: abovegrade, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	54
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure foundation installation + PG&E IT Work	56

Alternative 6a Overlapping Noise Levels at NR2 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach + PG&E IT Work	7/28/2027	7/28/2027	1	53	48
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	7/29/2027	8/22/2027	21	67	48
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	8/23/2027	8/31/2027	8	67	48
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter)	9/1/2027	9/22/2027	19	67	48
Collinsville Substation: abovegrade, 230 kV submarine cable installation, Northern Transition Approach	9/23/2027	10/30/2027	33	51	48
Collinsville Substation: abovegrade, Northern Transition Approach	10/31/2027	11/29/2027	25	44	48
Collinsville Substation: abovegrade	11/30/2027	1/31/2028	54	43	48

Alternative 6a Overlapping Noise Levels at NR2 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach + PG&E IT Work	54
Collinsville Substation: abovegrade, Submarine cable, 230 kV underground north, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	67
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter) + PG&E IT Work	67
Collinsville Substation: abovegrade, Submarine cable, Northern Transition Approach, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection:conductor installation (with helicopter)	67
Collinsville Substation: abovegrade, 230 kV submarine cable installation, Northern Transition Approach	53
Collinsville Substation: abovegrade, Northern Transition Approach	49
Collinsville Substation: abovegrade	49

Alternative 6a Overlapping Noise Levels at NR2 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade, Collinsville Substation: Site and ROW restoration	2/1/2028	2/10/2028	9	51	48
Collinsville Substation: Site and ROW restoration	2/11/2028	7/16/2028	134	50	48

Alternative 6a Overlapping Noise Levels at NR2 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade, Collinsville Substation: Site and ROW restoration	53
Collinsville Substation: Site and ROW restoration	52

Alternative 6a Overlapping Noise Levels at NR1 with MM NOI-1	
Minimum noise level	49
Maximum noise level	67
Project days	666
Days above 55 dBA	124
Percentage of days above 55 dBA	19%

Alternative 6b1 Overlapping Noise Levels at NR1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: Site development	5/1/2026	5/31/2026	26	55	48	
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/15/2026	39	57	48	
Collinsville Substation: Site development	7/16/2026	8/13/2026	25	55	48	
Collinsville Substation: Site development + Colinsville Substation: Below-grade	8/14/2026	8/28/2026	13	59	48	
Colinsville Substation: Below-grade	8/29/2026	12/31/2026	107	57	48	
Colinsville Substation: Below-grade + PG&E IT Work	1/1/2027	1/22/2027	19	58	48	
Colinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	1/23/2027	2/5/2027	12	59	48	
Collinsville Substation: abovegrade + PG&E IT Work	2/6/2027	4/30/2027	72	55	48	
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/16/2027	13	56	48	
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027	3	56	48	
Collinsville Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/20/2027	5/21/2027	2	57	48	

Alternative 6b1 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	56
Collinsville Substation: Site development + 12 kV distribution	58
Collinsville Substation: Site development	56
Collinsville Substation: Site development + Collinsville Substation: Below-grade	59
Collinsville Substation: Below-grade	57
Collinsville Substation: Below-grade + PG&E IT Work	58
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	59
Collinsville Substation: abovegrade + PG&E IT Work	56
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	56
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	57
Collinsville Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	57

Alternative 6b1 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/22/2027	5/31/2027	17	56	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + 230 kV underground north + PG&E IT Work	6/1/2027	6/10/2027	9	60	
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV underground north + PG&E IT Work	6/11/2027	6/14/2027	3	60	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + Northern Transition Approach + 230 kV underground north + PG&E IT Work	6/15/2027	6/30/2027	14	60	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Northern Transition Approach + 230 kV underground north + PG&E IT Work	7/1/2027	8/2/2027	28	60	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Northern Transition Approach + 230 kV underground north + PG&E IT Work	8/3/2027	8/29/2027	66	60	48

Alternative 6b1 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	57
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + 230 kV underground north + PG&E IT Work	
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV underground north + PG&E IT Work	60
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + Northern Transition Approach + 230 kV underground north + PG&E IT Work	60
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Northern Transition Approach + 230 kV underground north + PG&E IT Work	61
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Northern Transition Approach + 230 kV underground north + PG&E IT Work	61

Alternative 6b1 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	8/30/2027	8/31/2027	2	60	55
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north	9/1/2027	10/18/2027	41	60	55
Collinsville Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	10/19/2027	10/19/2027	1	56	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	10/20/2027	10/30/2027	10	61	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	10/31/27	11/29/27	25	61	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter)	11/30/27	12/5/27	5	61	48
Collinsville Substation: abovegrade	12/6/27	1/17/28	37	53	48
Collinsville Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	1/18/28	1/31/28	12	60	48

Alternative 6b1 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	61
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north	62
Collinsvile Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	57
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	62
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	61
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter)	61
Collinsvile Substation: abovegrade	54
Collinsvile Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	61

Alternative 6b1 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/1/28	2/14/28	12	61	48
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/15/28	2/24/28	9	60	48
Collinsville Substation: Site and ROW restoration	2/25/28	7/17/28	123	51	48

Alternative 6b1 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	61
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	60
Collinsville Substation: Site and ROW restoration	53

Alternative 6b1 Overlapping Noise Levels at NR1	
Min noise level	53
Max noise level	62
Project days	745
Days above 55 dBA	576
Percentage of days above DBA	77%

Alternative 6b1 Overlapping Noise Levels at NR2a1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)	
Collinsville Substation: Site development	5/1/2026	5/31/2026	26	55	30	
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/15/2026	39	56	30	
Collinsville Substation: Site development	7/16/2026	8/13/2026	25	55	30	
Collinsville Substation: Site development + Colinsville Substation: Below-grade	8/14/2026	8/28/2026	13	58	30	
Colinsville Substation: Below-grade	8/29/2026	12/31/2026	107	56	30	
Colinsville Substation: Below-grade + PG&E IT Work	1/1/2027	1/22/2027	19	57	30	
Colinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	1/23/2027	2/5/2027	12	60	30	
Collinsville Substation: abovegrade + PG&E IT Work	2/6/2027	4/30/2027	72	57	30	
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/16/2027	13	57	30	
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027	3	57	30	
Collinsville Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/20/2027	5/21/2027	2	58	30	

Alternative 6b1 Overlapping Noise Levels at NR2a1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	55
Collinsville Substation: Site development + 12 kV distribution	56
Collinsville Substation: Site development	55
Collinsville Substation: Site development + Collinsville Substation: Below-grade	58
Collinsville Substation: Below-grade	56
Collinsville Substation: Below-grade + PG&E IT Work	57
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	60
Collinsville Substation: abovegrade + PG&E IT Work	57
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	57
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	57
Collinsville Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	58

Alternative 6b1 Overlapping Noise Levels at NR2a1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/22/2027	5/31/2027	17	58	30
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + 230 kV underground north + PG&E IT Work	6/1/2027	6/10/2027	9	58	30
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV underground north + PG&E IT Work	6/11/2027	6/14/2027	3	58	30
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + Northern Transition Approach + 230 kV underground north + PG&E IT Work	6/15/2027	6/30/2027	14	58	30
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Northern Transition Approach + 230 kV underground north + PG&E IT Work	7/1/2027	8/2/2027	28	59	30
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Northern Transition Approach + 230 kV underground north + PG&E IT Work	8/3/2027	8/29/2027	66	59	30

Alternative 6b1 Overlapping Noise Levels at NR2a1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	58
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + 230 kV underground north + PG&E IT Work	58
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV underground north + PG&E IT Work	58
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + Northern Transition Approach + 230 kV underground north + PG&E IT Work	58
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Northern Transition Approach + 230 kV underground north + PG&E IT Work	59
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Northern Transition Approach + 230 kV underground north + PG&E IT Work	59

Alternative 6b1 Overlapping Noise Levels at NR2a1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	8/30/2027	8/31/2027	2	59	30
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north	9/1/2027	10/18/2027	41	58	30
Collinsville Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	10/19/2027	10/19/2027	1	57	30
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	10/20/2027	10/30/2027	10	61	30
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	10/31/2027	11/29/2027	25	60	30
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter)	11/30/2027	12/5/2027	5	60	30
Collinsville Substation: abovegrade	12/6/2027	1/17/2028	37	56	30
Collinsville Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	1/18/2028	1/31/2028	12	60	30

Alternative 6b1 Overlapping Noise Levels at NR2a1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	58
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north	59
Collinsvile Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	57
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	61
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	60
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter)	60
Collinsvile Substation: abovegrade	56
Collinsvile Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	60

Alternative 6b1 Overlapping Noise Levels at NR2a1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/1/2028	2/14/2028	12	61	30
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/15/2028	2/24/2028	9	59	30
Collinsville Substation: Site and ROW restoration	2/25/2028	7/17/2028	123	50	30

Alternative 6b1 Overlapping Noise Levels at NR2a1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	61
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	59
Collinsville Substation: Site and ROW restoration	50

Alternative 6b1 Overlapping Noise Levels at NR2a1	
Min noise level	50
Max noise level	61
Project days	745
Days above 55 dBA	571
Percentage of days above DBA	77%

Alternative 6b1 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Colinsville Substation: Below-grade + PG&E IT Work	1/1/2027	1/22/2027	19	48	48
Colinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	1/23/2027	2/5/2027	12	49	48
Collinsville Substation: abovegrade + PG&E IT Work	2/6/2027	4/30/2027	72	45	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/16/2027	13	49	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027	3	50	48
Collinsville Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/20/2027	5/21/2027	2	52	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/22/2027	5/31/2027	17	51	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + 230 kV underground north + PG&E IT Work	06/01/27	2027-06-10	9	58	

Alternative 6b1 Overlapping Noise Levels at NR1 with MM NOI-1

Overlapping construction activities	Existing daytime ambient sound level (NM2) (Leq dBA)	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Below-grade + PG&E IT Work	48	51
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	48	52
Collinsville Substation: abovegrade + PG&E IT Work	48	50
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	48	51
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	48	52
Collinsville Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	48	54
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	48	53
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + 230 kV underground north + PG&E IT Work		

Alternative 6b1 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV underground north + PG&E IT Work	2027-06-11	2027-06-14	3	58	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	2027-06-15	2027-06-30	14	58	48
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	2027-07-01	2027-08-02	28	64	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	2027-08-03	2027-08-29	66	64	48
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	2027-08-30	8/31/2027	2	64	55
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north	2027-09-01	2027-10-18	41	64	55

Alternative 6b1 Overlapping Noise Levels at NR1 with MM NOI-1

Overlapping construction activities	Existing daytime ambient sound level (NM2) (Leq dBA)	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV underground north + PG&E IT Work	48	58
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	48	58
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	48	64
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	48	64
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	55	65
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north	55	61

Alternative 6b1 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: abovegrade + 230 kV submarine segment + Northern Transition Approach	10/19/2027	10/19/2027	1	63	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Northern Transition Approach	10/20/2027	10/30/2027	10	65	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Northern Transition Approach	10/31/2027	11/29/2027	25	60	48
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter)	11/30/2027	12/5/2027	5	60	48
Collinsville Substation: abovegrade	12/6/27	1/17/28	37	43	48
Collinsville Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	1/18/28	1/31/28	12	60	48
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/1/28	2/14/28	12	60	48

Alternative 6b1 Overlapping Noise Levels at NR1 with MM NOI-1

Overlapping construction activities	Existing daytime ambient sound level (NM2) (Leq dBA)	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	48	63
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	48	65
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	48	60
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter)	48	60
Collinsville Substation: abovegrade	48	49
Collinsville Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	48	60
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	48	60

Alternative 6b1 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/15/28	2/24/28	9	60	48
Collinsville Substation: Site and ROW restoration	2/25/28	7/17/28	123	41	48

Alternative 6b1 Overlapping Noise Levels at NR1 with MM NOI-1

Overlapping construction activities	Existing daytime ambient sound level (NM2) (Leq dBA)	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection: conductor installation (without helicopter)	48	60
Collinsville Substation: Site and ROW restoration	48	49

Alternative 6b1 Overlapping Noise Levels at NR1 with MM NOI-1	
Min noise level	49
Max noise level	65
Project days	745
Days above 55 dBA	228
Percentage of days above DBA	31%

Alternative 6b1 Overlapping Noise Levels at NR2a1 with MM NOI-1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)	
Collinsville Substation: Site development	5/1/2026	5/31/2026	26	45	30	
Collinsville Substation: Site development + 12 kV distribution	6/1/2026	7/15/2026	39	52	30	
Collinsville Substation: Site development	7/16/2026	8/13/2026	25	45	30	
Collinsville Substation: Site development + Collinsville Substation: Below-grade	8/14/2026	8/28/2026	13	48	30	
Collinsville Substation: Below-grade	8/29/2026	12/31/2026	107	46	30	
Collinsville Substation: Below-grade + PG&E IT Work	1/1/2027	1/22/2027	19	47	30	
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	1/23/2027	2/5/2027	12	50	30	
Collinsville Substation: abovegrade + PG&E IT Work	2/6/2027	4/30/2027	72	47	30	
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/16/2027	13	49	30	
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027	3	50	30	
Collinsville Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/20/2027	5/21/2027	2	52	30	

Alternative 6b1 Overlapping Noise Levels at NR2a1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	45
Collinsville Substation: Site development + 12 kV distribution	52
Collinsville Substation: Site development	45
Collinsville Substation: Site development + Collinsville Substation: Below-grade	49
Collinsville Substation: Below-grade	46
Collinsville Substation: Below-grade + PG&E IT Work	47
Collinsville Substation: Below-grade + Collinsville Substation: abovegrade + PG&E IT Work	50
Collinsville Substation: abovegrade + PG&E IT Work	47
Collinsville Substation: abovegrade + 230 kV overhead: access road + PG&E IT Work	49
Collinsville Substation: abovegrade + 230 kV overhead: access road + 500 kV interconnection: structure foundation installation + PG&E IT Work	50
Collinsville Substation: abovegrade + 230 kV overhead: access road + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	52

Alternative 6b1 Overlapping Noise Levels at NR2a1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	5/22/2027	5/31/2027	17	51	30
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + 230 kV underground north + PG&E IT Work	6/1/2027	6/10/2027	9	53	30
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV underground north + PG&E IT Work	6/11/2027	6/14/2027	3	53	30
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + Northern Transition Approach + 230 kV underground north + PG&E IT Work	6/15/2027	6/30/2027	14	53	30
Collinsville Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Northern Transition Approach + 230 kV underground north + PG&E IT Work	7/1/2027	8/2/2027	28	61	30
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Northern Transition Approach + 230 kV underground north + PG&E IT Work	8/3/2027	8/29/2027	66	61	30

Alternative 6b1 Overlapping Noise Levels at NR2a1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + PG&E IT Work	51
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 500 kV interconnection: structure foundation installation + 230 kV underground north + PG&E IT Work	53
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV underground north + PG&E IT Work	53
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + Northern Transition Approach + 230 kV underground north + PG&E IT Work	53
Collinsvile Substation: abovegrade + 230kV overhead:structure foundation installation + 230 kV submarine segment + Northern Transition Approach + 230 kV underground north + PG&E IT Work	61
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Northern Transition Approach + 230 kV underground north + PG&E IT Work	61

Alternative 6b1 Overlapping Noise Levels at NR2a1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	8/30/2027	8/31/2027	2	61	30
Collinsville Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north	9/1/2027	10/18/2027	41	61	30
Collinsville Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	10/19/2027	10/19/2027	1	60	30
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	10/20/27	10/30/27	10	62	30
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	10/31/27	11/29/27	25	59	30
Collinsville Substation: abovegrade + 230 kV Conductor installation (without helicopter)	11/30/27	12/5/27	5	59	30
Collinsville Substation: abovegrade	12/6/27	1/17/28	37	46	30
Collinsville Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	1/18/28	1/31/28	1200%	59	30

Alternative 6b1 Overlapping Noise Levels at NR2a1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north + PG&E IT Work	61
Collinsvile Substation: abovegrade + 230 kV overhead:structure installation + 230 kV submarine segment + Norhtern Transition Apporach + 230 kV underground north	61
Collinsvile Substation: abovegrade + 230 kV submarine segment + Norhtern Transition Apporach	60
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + 230 kV submarine segment + Norhtern Transition Apporach	62
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter) + Norhtern Transition Apporach	59
Collinsvile Substation: abovegrade + 230 kV Conductor installation (without helicopter)	59
Collinsvile Substation: abovegrade	46
Collinsvile Substation: abovegrade + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	59

Alternative 6b1 Overlapping Noise Levels at NR2a1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/1/2028	2/14/2028	12	59	30
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	2/15/28	2/24/28	9	58	30
Collinsville Substation: Site and ROW restoration	2/25/28	7/17/28	123	40	30

Alternative 6b1 Overlapping Noise Levels at NR2a1 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: abovegrade + Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	59
Collinsville Substation: Site and ROW restoration + 500 kV interconnection: structure installation (without helicopter) + 500 kV interconnection:conductor installation (without helicopter)	58
Collinsville Substation: Site and ROW restoration	41

Alternative 6b1 Overlapping Noise Levels at NR2a1 with MM NOI-1	
Min noise level	41
Max noise level	62
Project days	745
Days above 55 dBA	211
Percentage of days above DBA	28%

Alternative 6b2 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026	26	55	48
Collinsville Substation: Site development, 12 kV distribution	6/1/2026	7/15/2026	39	55	48
Collinsville Substation: Site development	7/16/2026	8/31/2026	40	55	48
Collinsville Substation: Site development, Collinsville Substation: Below-grade	9/1/2026	9/13/2026	11	59	48
Collinsville Substation: Below-grade	9/14/2026	12/31/2026		57	48
Collinsville Substation: Below-grade + PG&E IT Work	1/11/2027	2/9/2027		58	
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	2/10/2027	2/23/2027	12	59	48
Collinsville Substation: Above-grade + PG&E IT Work	2/24/2027	4/30/2027	57	55	48
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/16/2027	13	56	48
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027	3	64	48
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/20/2027	5/31/2027	10	64	48

Alternative 6b2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	56
Collinsville Substation: Site development, 12 kV distribution	56
Collinsville Substation: Site development	56
Collinsville Substation: Site development, Collinsville Substation: Below-grade	59
Collinsville Substation: Below-grade	57
Collinsville Substation: Below-grade + PG&E IT Work	
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	59
Collinsville Substation: Above-grade + PG&E IT Work	56
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	56
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	64
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	64

Alternative 6b2 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/1/2027	6/7/2027	6	60	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/8/2027	6/10/2027	3	60	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/11/2027	6/14/2027	3	57	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/15/2027	6/30/2027	14	60	48

Alternative 6b2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	61
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	60
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	57
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	60

Alternative 6b2 Overlapping Noise Levels at NR1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq	Existing daytime ambient	
				dBA)	sound level (NM2) (Leq dBA)	
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	7/1/2027	7/27/2027		23	60	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + 230 KV underground north + PG&E IT Work	7/28/2027	8/23/2027		23	57	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	8/24/2027	8/29/2025		7	56	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach ++ PG&E IT Work	8/30/2027	8/31/2027		2	56	48
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/1/2027	9/28/2027		26	57	48
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/29/2027	10/19/2027		18	54	48

Alternative 6b2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	60
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + 230 KV underground north + PG&E IT Work	57
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	57
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach ++ PG&E IT Work	57
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	57
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	55

Alternative 6b2 Overlapping Noise Levels at NR1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	10/20/27	10/30/27		10	60	48
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	10/31/27	11/29/27		25	60	48
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	11/30/27	1/7/28		42	60	48
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/18/28	1/21/28		4	72	48
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/22/28	1/31/28		800%	72	48

Alternative 6b2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	60
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	60
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	60
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	72
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	72

Alternative 6b2 Overlapping Noise Levels at NR1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/1/28	2/24/28	21	72	48
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/25/28	2/28/28	3	72	48

Alternative 6b2 Overlapping Noise Levels at NR1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	72
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	72

Alternative 6b2 Overlapping Noise Levels at NR1	
Min noise level	55
Max noise level	72
Project days	449
Days above 55 dBA	431
Percentage of days above DBA	96%

Alternative 6b2 Overlapping Noise Levels at NR6						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)	
Collinsville Substation: Site development	5/1/2026	5/31/2026	26	55	30	
Collinsville Substation: Site development, 12 kV distribution	6/1/2026	7/15/2026	39	63	30	
Collinsville Substation: Site development	7/16/2026	8/31/2026	40	55	30	
Collinsville Substation: Site development, Collinsville Substation: Below-grade	9/1/2026	9/13/2026	11	58	30	
Collinsville Substation: Below-grade	9/14/2026	12/31/2026	94	56	30	
Collinsville Substation: Below-grade + PG&E IT Work	1/11/2027	2/9/2027	26	57	30	
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	2/10/2027	2/23/2027	12	60	30	
Collinsville Substation: Above-grade + PG&E IT Work	2/24/2027	4/30/2027	57	57	30	
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/16/2027	13	57	30	
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027	3	58	30	
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/20/2027	5/31/2027	10	58	30	

Alternative 6b2 Overlapping Noise Levels at NR6	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	55
Collinsville Substation: Site development, 12 kV distribution	63
Collinsville Substation: Site development	55
Collinsville Substation: Site development, Collinsville Substation: Below-grade	58
Collinsville Substation: Below-grade	56
Collinsville Substation: Below-grade + PG&E IT Work	
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	60
Collinsville Substation: Above-grade + PG&E IT Work	57
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	57
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	58
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	58

Alternative 6b2 Overlapping Noise Levels at NR6					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/1/2027	6/7/2027	6	61	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/8/2027	6/10/2027	3	61	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/11/2027	6/14/2027	3	58	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/15/2027	6/30/2027	14	61	30

Alternative 6b2 Overlapping Noise Levels at NR6	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	61
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	61
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	58
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	61

Alternative 6b2 Overlapping Noise Levels at NR6					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	7/1/2027	7/27/2027		23	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + 230 KV underground north + PG&E IT Work	7/28/2027	8/23/2027		23	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	8/24/2027	8/31/2027		7	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach ++ PG&E IT Work	8/30/2027	8/31/2027		2	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	8/30/2027	9/28/2027		24	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/29/2027	10/19/2027		18	30

Alternative 6b2 Overlapping Noise Levels at NR6	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	61
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + 230 KV underground north + PG&E IT Work	58
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	58
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach ++ PG&E IT Work	58
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	58
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	57

Alternative 6b2 Overlapping Noise Levels at NR6						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)	
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	10/20/2027	10/30/2027		10	61	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	10/31/2027	11/29/2027		25	61	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	11/30/2027	1/7/2028		42	60	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/18/2028	1/21/2028		400%	73	30
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/22/2028	1/31/2028		8	73	30

Alternative 6b2 Overlapping Noise Levels at NR6	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	61
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	61
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	60
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	73
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	73

Alternative 6b2 Overlapping Noise Levels at NR6					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/1/2028	2/24/2028	21	73	30
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/25/2028	2/28/2028	3	73	30

Alternative 6b2 Overlapping Noise Levels at NR6	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	73
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	73

Alternative 6b2 Overlapping Noise Levels at NR6	
Min noise level	55
Max noise level	73
Project days	567
Days above 55 dBA	475
Percentage of days above DBA	84%

Alternative 6b2 Overlapping Noise Levels at NR1 with MM NOI-1						
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)	
Collinsville Substation: Site development	5/1/26	5/31/26	26	45	30	
Collinsville Substation: Site development, 12 kV distribution	6/1/26	7/15/26	39	45	30	
Collinsville Substation: Site development	7/16/26	8/31/26	40	45	30	
Collinsville Substation: Site development, Collinsville Substation: Below-grade	9/1/26	9/13/26	11	49	30	
Collinsville Substation: Below-grade	9/14/26	12/31/26	94	47	30	
Collinsville Substation: Below-grade + PG&E IT Work	1/11/27	2/9/27	26	48	30	
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	2/10/27	2/23/27	12	49	30	
Collinsville Substation: Above-grade + PG&E IT Work	2/24/27	4/30/27	57	45	30	
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	5/1/27	5/16/27	13	48	30	
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/27	5/19/27	3	63	30	
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/20/27	5/31/27	10	63	30	

Alternative 6b2 Overlapping Noise Levels at NR1 with MM NOI-1

Overlapping construction activities	Existing daytime ambient sound level (NM2) (Leq dBA)	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	30	45
Collinsville Substation: Site development, 12 kV distribution	30	46
Collinsville Substation: Site development	30	45
Collinsville Substation: Site development, Collinsville Substation: Below-grade	30	49
Collinsville Substation: Below-grade	30	47
Collinsville Substation: Below-grade + PG&E IT Work	30	48
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	30	49
Collinsville Substation: Above-grade + PG&E IT Work	30	45
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	30	48
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	30	63
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	30	63

Alternative 6b2 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/1/27	6/7/27	6	59	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/8/27	6/10/27	3	59	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/11/27	6/14/27	3	52	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/15/27	6/30/27	14	58	30

Alternative 6b2 Overlapping Noise Levels at NR1 with MM NOI-1

Overlapping construction activities	Existing daytime ambient sound level (NM2) (Leq dBA)	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	30	59
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	30	59
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	30	52
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	30	58

Alternative 6b2 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	7/1/27	7/27/27	23	58	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + 230 KV underground north + PG&E IT Work	7/28/27	8/23/27	23	52	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	8/24/27	8/29/27	7	51	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	8/30/27	8/31/25	2	59	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/1/27	9/28/27	24	59	30

Alternative 6b2 Overlapping Noise Levels at NR1 with MM NOI-1

Overlapping construction activities	Existing daytime ambient sound level (NM2) (Leq dBA)	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	30	58
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + 230 KV underground north + PG&E IT Work	30	52
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	30	51
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	30	59
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	30	59

Alternative 6b2 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/29/27	10/19/27	18	49	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	10/20/27	10/30/27	10	59	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	10/31/27	11/29/27	25	59	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	11/30/27	1/7/28	42	59	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/18/28	1/21/28	4	72	30

Alternative 6b2 Overlapping Noise Levels at NR1 with MM NOI-1

Overlapping construction activities	Existing daytime ambient sound level (NM2) (Leq dBA)	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	30	49
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	30	59
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	30	59
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	30	59
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	30	72

Alternative 6b2 Overlapping Noise Levels at NR1 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (NM2) (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/22/28	1/31/28	8	72	30
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/1/28	2/24/28	21	72	30
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/25/28	2/28/28	3	72	30

Alternative 6b2 Overlapping Noise Levels at NR1 with MM NOI-1

Overlapping construction activities	Existing daytime ambient sound level (NM2) (Leq dBA)	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	30	72
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	30	72
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	30	72

Alternative 6b2 Overlapping Noise Levels at NR1 with MM NOI-1	
Min noise level	45
Max noise level	72
Project days	567
Days above 55 dBA	198
Percentage of days above DBA	35%

Alternative 6b2 Overlapping Noise Levels at NR6 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Site development	5/1/2026	5/31/2026	26	45	30
Collinsville Substation: Site development, 12 kV distribution	6/1/2026	7/15/2026	39	62	30
Collinsville Substation: Site development	7/16/2026	8/31/2026	40	45	30
Collinsville Substation: Site development, Collinsville Substation: Below-grade	9/1/2026	9/13/2026	11	48	30
Collinsville Substation: Below-grade	9/14/2026	12/31/2026	94	46	30
Collinsville Substation: Below-grade + PG&E IT Work	1/11/2027	2/9/2027	26	47	30
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	2/10/2027	2/23/2027	12	50	30
Collinsville Substation: Above-grade + PG&E IT Work	2/24/2027	4/30/2027	57	47	30
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	5/1/2027	5/16/2027	13	49	30
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/17/2027	5/19/2027	3	53	30
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	5/20/2027	5/31/2027	10	54	30

Alternative 6b2 Overlapping Noise Levels at NR6 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Site development	45
Collinsville Substation: Site development, 12 kV distribution	62
Collinsville Substation: Site development	45
Collinsville Substation: Site development, Collinsville Substation: Below-grade	49
Collinsville Substation: Below-grade	46
Collinsville Substation: Below-grade + PG&E IT Work	
Collinsville Substation: Below-grade, Collinsville Substation: Above-grade + PG&E IT Work	50
Collinsville Substation: Above-grade + PG&E IT Work	47
Collinsville Substation: Above-grade, 230 kV overhead: access road + PG&E IT Work	49
Collinsville Substation: Above-grade, 230 kV overhead: access road, 500 kV interconnection: structure foundation installation + PG&E IT Work	53
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation + PG&E IT Work	54

Alternative 6b2 Overlapping Noise Levels at NR6 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/1/2027	6/7/2027	6	59	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/8/2027	6/10/2027	3	59	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/11/2027	6/14/2027	3	51	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	6/15/2027	6/30/2027	14	59	30

Alternative 6b2 Overlapping Noise Levels at NR6 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: access road, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	59
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV interconnection: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	59
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	51
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	59

Alternative 6b2 Overlapping Noise Levels at NR6 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	7/1/2027	7/27/2027	23	59	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + 230 KV underground north + PG&E IT Work	7/28/2027	8/23/2027	23	53	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	8/24/2027	8/29/2027	7	53	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	8/30/2027	8/31/2025	2	59	30
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/1/2027	9/28/2027	24	58.9	30

Alternative 6b2 Overlapping Noise Levels at NR6 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach, 500 kV Transposition Structures: Foundation Installation + 230 KV underground north + PG&E IT Work	59
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + 230 KV underground north + PG&E IT Work	53
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	53
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach + PG&E IT Work	59
Collinsville Substation: Above-grade, 230 kV overhead: structure foundation installation, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	58.9

Alternative 6b2 Overlapping Noise Levels at NR6 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	9/29/27	10/19/27	18	52.2	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	10/20/27	10/30/27	10	59	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	10/31/27	11/29/27	25	59.1	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	11/30/27	1/7/28	42	58.4	30
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/18/28	1/21/28	4	73	30

Alternative 6b2 Overlapping Noise Levels at NR6 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV submarine segment, Northern Transition Approach	52.2
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 230 kV submarine segment, Northern Transition Approach	59
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), Northern Transition Approach	59.1
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter)	58.4
Collinsville Substation: Above-grade, 230 kV overhead: structure installation, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	73

Alternative 6b2 Overlapping Noise Levels at NR6 with MM NOI-1					
Overlapping construction activities	Overlap Period Start Date	Overlap Period End Date	Work days	Project sound level (Leq dBA)	Existing daytime ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	1/22/28	1/31/28	8	73	30
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/1/28	2/24/28	21	73	30
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	2/25/28	2/28/28	3	73	30

Alternative 6b2 Overlapping Noise Levels at NR6 with MM NOI-1	
Overlapping construction activities	Combined project and existing ambient sound level (Leq dBA)
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	73
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV interconnection: structure installation (with helicopter), 500 kV interconnection: conductor installation (without helicopter), 500 kV Transposition Structures: Structure and Conductor Installation (helo)	73
Collinsville Substation: Above-grade, 230 kV Conductor installation (with helicopter), Collinsville Substation: Site and ROW restoration, 500 kV Transposition Structures: Structure and Conductor Installation (helo)	73

Alternative 6b2 Overlapping Noise Levels at NR6 with MM NOI-1	
Min noise level	45
Max noise level	73
Project days	567
Days above 55 dBA	224
Percentage of days above DBA	40%