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**4.12 NOISE**

Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a.	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**4.12.1 Introduction**

This section of the PEA describes the existing conditions and potential project-related impacts to noise in the vicinity of the Proposed Project. The analysis concludes that less than significant impacts related to noise will occur. The Proposed Project’s potential effects on this resource were evaluated using the significance criteria set forth in Appendix G of the CEQA Guidelines. The conclusions are summarized in the checklist above, and discussed in more detail in Section 4.12.6.

**4.12.1.1 Overview of Sound Measurement**

Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 hertz).

In addition to the instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound pressure level is the equivalent noise level ( $L_{eq}$ ). The  $L_{eq}$  is defined as the single

steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Typically,  $L_{eq}$  is summed over a one-hour period.

The time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the daytime. To evaluate community noise on a 24-hour basis, the day-night average sound level was developed ( $L_{dn}$ ).  $L_{dn}$  is the average of all A-weighted levels for a 24-hour period with a 10 dB upward adjustment added to those noise levels occurring between 10:00 p.m. and 7:00 a.m. to account for the general increased sensitivity of people to nighttime noise levels.

#### 4.12.1.2 **Fundamentals of Groundborne Vibration**

Vibration is sound radiated through the ground. The rumbling sound caused by the vibration of ground surfaces is called groundborne noise. The ground motion caused by vibration is measured as particle velocity in inches per second and, in the U.S., is referenced as vibration decibels (VdB).

The background vibration velocity level in residential areas is usually around 50 VdB. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. The general human response to different levels of groundborne vibration velocity levels is described in Table 4.12-1.

**Table 4.12-1. Human Response to Different Levels of Groundborne Vibration**

<b>Vibration Velocity Level</b>	<b>Human Reaction</b>
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level annoying.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.
90 VdB	Difficulty with tasks such as reading computer screens.

*Source:* Federal Transit Administration 2006.

### 4.12.2 **Regulatory Setting**

#### 4.12.2.1 **Federal**

There are no federal noise standards that directly regulate environmental noise. Although the Marine Corps provides regulation regarding noise, this pertains to the protection of the public from excessive noise related to military activity. There are no noise standards at MCB Camp Pendleton that regulate non-military activities within their boundaries. In 1974, the U.S. Environmental Protection Agency (USEPA) established guidelines for noise levels, below which the general population will not be at risk from any identified noise effects. The USEPA guidelines include the following:

- $L_{eq}(24)$  less than or equal to 70 dBA to protect against hearing loss.

- Day-night equivalent noise level ( $L_{dn}$ ) less than or equal to 55 dBA to protect against activity interference and annoyance in residential areas, farms, and other outdoor areas where quiet is a basis for use.
- $L_{eq}(24)$  less than or equal to 55 dBA to protect against outdoor activity interference where limited time is spent, such as school yards and playgrounds.
- $L_{dn}$  less than or equal to 45 dBA to protect against indoor activity interference and annoyance in residences.
- $L_{eq}(24)$  less than or equal to 45 dBA to protect against indoor activity interference in school yards.

These levels are not regulations, but exist to protect public health and welfare with an adequate safety margin, and to provide guidelines for implementing noise standards locally. The federal government has passed various general laws to regulate and limit noise levels, as identified in the following subsections.

#### **Noise Pollution and Abatement Act of 1970**

The Noise Pollution and Abatement Act of 1970 established the Office of Noise Abatement and Control (ONAC) within the USEPA, authorized to conduct a full and complete investigation of noise and its effect on public health and welfare. The investigation would include an identification of noise sources, projected noise levels, and effects of noise on persons, animals, and property.

In 1981, the Administration concluded that noise issues were best handled at the state or local government level. As a result, the USEPA phased out ONAC's funding in 1982 as part of a shift in the federal noise control policy to transfer primary regulatory responsibility to state and local governments. The Noise Control Act of 1972 and the Quiet Communities Act of 1978, which are described in the following sections, were not rescinded by Congress and remain in effect.

#### **Noise Control Act of 1972**

The Noise Control Act of 1972 was the first comprehensive statement of national noise policy. It states, "It is the policy of the U.S. to promote an environment for all Americans free from noise that jeopardizes their health or welfare."

#### **Quiet Communities Act of 1978**

The Noise Control Act was amended by the Quiet Communities Act of 1978 to promote the development of effective state and local noise control programs, to fund noise research, and to produce and disseminate educational materials to the public on the harmful effects of noise and ways to effectively control it.

By 2002, agencies, including the Department of Transportation, Department of Labor, Federal Railroad Administration, and Federal Aviation Administration, developed their own noise control programs, with each agency setting its own criteria.

#### **Occupational Health and Safety Act of 1970**

This act covers all employers and their employees in the 50 states, the District of Columbia, Puerto Rico, and other U.S. territories. Administered by the Occupational Health and Safety Administration (OSHA), the act assigns OSHA two regulatory functions: setting standards and conducting inspections to ensure that employers are providing safe workplaces. OSHA standards may require that employers adopt certain practices, means, methods, or processes that are reasonably necessary and appropriate to protect workers on the job. This act includes a regulation for worker noise exposure at 90 dBA over an 8-hour work shift.

Areas where exposure exceeds 85 dBA must be designated and labeled as high-noise-level areas and workers are required to use hearing protection.

### **Federal Aviation Administration (FAA)**

The FAA establishes 65 dBA Community Noise Equivalent Level (CNEL) as the noise standard associated with aircraft noise measured at exterior locations in noise-sensitive land uses (NSLU). NSLU is defined as one of the following: residence, hospital, school, hotel, resort, library, or any other facility where quiet is an important attribute of the environment. CNEL measurements are weighted averages of sound levels gathered over a 24-hour period, measuring ambient noise. Measurements taken during day, evening, and nighttime periods are weighted separately, as people are most sensitive to noise during late night hours and evening hours than in daytime hours.

#### **4.12.2.2 State**

##### **California Noise Control Act**

The California Noise Control Act states that excessive noise is a serious hazard to public health and welfare and exposure to certain noise levels can result in physiological, psychological, and economic damage. It also recognizes that noise levels are increasing in urban, suburban, and rural areas. This act states that the State of California has the responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise.

#### **4.12.2.3 Local**

As provided in CPUC General Order 131-D, the CPUC preempts local discretionary authority over the location and construction of electrical utility facilities. The following discussion of relevant local land use plans and policies that pertain to noise is provided below for informational purposes.

##### **City of San Clemente General Plan**

The City of San Clemente Centennial General Plan (City of San Clemente 2014) is the comprehensive planning document for the City of San Clemente. The Safety Element of the General Plan establishes policies to protect residents, including the following:

*S-4.01. Noise Control.* Effectively control ambient and stationary noise conditions by maintaining baseline information, monitoring conditions, following State guidelines, and enforcing locally adopted ordinances and building codes.

*S-4.06. Truck Routes.* Designate areas where truck traffic is prohibited to minimize truck traffic noise impacts to sensitive land uses.

*S-4.07. Collaboration with Camp Pendleton.* Collaborate with the United States Marine Corps, Camp Pendleton, to minimize the impacts of noise- or vibration-inducing activities on San Clemente residents and to inform the community in advance when such activities will be conducted.

##### **San Clemente Noise Ordinance**

The San Clemente Noise Ordinance provides noise regulations and noise level standards as well as guidelines for what determines a violation to these standards. Table 4.12-2 provides the noise standards that apply to all properties within the City, with the Land Use category referring to the affected receiver property.

**Table 4.12-2. Exterior Noise Standards**

Land Use	Allowable Exterior Noise Level	
	7:00 a.m. to 10:00 p.m.	10:00 p.m. to 7:00 a.m.
Residential	55 dBA	50 dBA
Residential portions of mixed-use, or residences located on property zoned for commercial, industrial or manufacturing land use	60 dBA	50 dBA
Commercial	65 dBA	60 dBA <sup>1</sup>
Industrial or manufacturing	70 dBA	70 dBA <sup>1</sup>

Notes: <sup>1</sup>= Standard only applies if commercial, industrial, or manufacturing buildings are occupied during these hours.

Source: City of San Clemente Noise Ordinance.

The ordinance states that any noise when measured on any other property shall not exceed:

1. The noise standard for a cumulative period of more than thirty (30) minutes in any hour.
2. The noise standard plus five (5) dBA for a cumulative period of more than fifteen (15) minutes in any hour.
3. The noise standard plus ten (10) dBA for a cumulative period of more than five (5) minutes in any hour.
4. The noise standard plus fifteen (15) dBA for a cumulative period of more than one (1) minute in any hour.
5. The noise standard plus twenty (20) dBA for any period of time.

The ordinance states that construction activities are exempt from the noise provisions, if:

- Activities only take place between 7:00 a.m. and 6:00 p.m. Monday through Friday and between 8:00 a.m. and 6:00 p.m. on Saturday.
- No activity occurs on a Sunday or a City-recognized holiday.
- All grading activities also comply with the City's Municipal Code regarding time of grading operations.

Under certain circumstances, the City will allow an exception to the noise ordinance provisions. Per Section 8.48.100, Exceptions procedure, the operator of a noise source may file an application with the Community Development Director for an exception. The application must include the specifics of the requested exception including, but not necessarily limited to, hours of noise-generating activity beyond the noise ordinance provisions, locations of where the noise-generating activity will take place, the duration of the activity, and the types of equipment involved with the activity.

The Planning Commission will evaluate the application to determine if the "...magnitude of nuisance caused by the offensive noise; the uses of property within the area of impingement by the noise; the time factors related to study, design, financing and construction of remedial work; the economic factors related to age and useful life of equipment; and the general public interest and welfare."

Should the Planning Commission deny the exception application, the applicant can appeal the decision by filing a notice of appeal with the Secretary of the City Council (City of San Clemente 1996).

## **Talega Specific Plan**

The Talega Specific Plan is a planning and regulatory document for the purpose of implementing the City of San Clemente Centennial General Plan. The Talega Specific Plan does not contain any regulations pertaining to construction-related noise.

### **4.12.3 Existing Setting**

#### **4.12.3.1 Summary of Noise-Sensitive Receptors**

Noise sensitive areas are considered to be any areas where there are dwelling units, or sites where frequent human uses occur. This includes residences, schools, libraries, hospitals, and public parks. The majority of the power line passes through non noise-sensitive areas of MCB Camp Pendleton. However, portions of the power line are located within and/or adjacent to noise-sensitive receptors as described below.

#### **Residences**

At the northern end of the Proposed Project area along Avenida Pico, the nearest City of San Clemente residences are located within 100 feet of Incidental Landing Area (ILA) and 150 feet of the Talega Staging Yard. At the southern end of the Proposed Project, the power line runs along the property boundaries of residential developments that are located on Avenida Santa Margarita and Avenida Cola.

#### **Schools**

There are five schools that are present on leased land within MCB Camp Pendleton. Two schools are under the Fallbrook Unified School District (Mary Fay Pendleton School and San Onofre Elementary School) and three are under the Oceanside Unified School District (North Terrace Elementary School, Santa Margarita Elementary School, and Stewart Mesa Elementary School). The San Onofre Elementary School is approximately 850 feet from Proposed Project alignment, and is the closest school to the Proposed Project. In San Clemente, there is one elementary school near the Proposed Project, Concordia Elementary School, which is located 1,270 feet to the west.

#### **Parks**

The Proposed Project alignment crosses lands on MCB Camp Pendleton that have been leased by the federal government to the California Department of Parks and Recreation. The City of San Clemente trail system crosses through the Proposed Project alignment in many locations. Pedestrians and bicycles are allowed on the trail system. San Mateo Campground at San Onofre State Beach, located off of Cristianitos Road, is across the street from a campground. In this area is also the San Clemente Golf Club. In addition, the Bella Collina Towne and Golf Club, Vista Bahia Park, and Richard T. Steed Memorial Park are within 250 feet of overhead reconductor routes. Also, a construction staging yard will be established adjacent to Vista Bahia Park. Patrons at Surf Beach and San Mateo Campground may be exposed to increased noise levels from construction activities, including traffic noise from construction vehicles and noise from helicopter operations.

#### **Other Noise-sensitive Receptors**

The Naval Hospital on MCB Camp Pendleton lies south of the Proposed Project alignment. In the surrounding area in San Clemente, the Saddleback Memorial Medical Center San Clemente is the closest hospital, and it lies approximately 7 miles away from the Proposed Project alignment. There is a library on MCB Camp Pendleton that is over 10 miles away from the Proposed Project alignment.



#### **4.12.3.2 Existing Noise Sources**

The dominant ambient noise sources in the northern end of the Proposed Project area are transportation-related and military operations on MCB Camp Pendleton. Noise levels range from 70 dBA for blast noise and greater than 75 dBA for aircraft and small arms noise.

At the southern end of the Proposed Project, the principal noise sources include traffic from Interstate 5 (I-5), train traffic on the rail line, surf, explosions at MCB Camp Pendleton, and frequent overflights by military aircraft. Of these, the most significant noise source is freeway traffic (Department of Parks and Recreation 1984). The increasing vehicular traffic on the I-5 corridor generates substantial noise, specifically during peak traffic hours. Noise levels above 75 dBA are common. At San Onofre State Beach campsite daytime noise levels due to I-5 traffic can reach 65  $L_{eq}$ .

#### **4.12.4 Applicant Proposed Measures**

The Proposed Project will incorporate the following APMs to avoid or minimize impacts related to noise:

##### **APM NOI-01. Construction Notification**

Residents within 50 feet of Proposed Project activities will receive notification of the start of construction at least one week prior to the start of construction activities in that area.

##### **APM NOI 02. Meet and Confer with City of San Clemente**

SDG&E will meet and confer with the City of San Clemente, as needed, to discuss any anticipated deviations from the requirements of the City's noise ordinance.

##### **APM NOI 03. Helicopter Use**

Helicopter takeoffs and landings conducted at the two ILAs along Avenida Pico and at and the Talega Staging Yard will be restricted to the furthest distance from residences as practicable. Helicopter usage will conform to acceptable hours for construction activities, as outlined within the San Clemente Noise Ordinance.

#### **4.12.5 Potential Impacts**

The Proposed Project includes reconductoring, removal of existing wood pole structures, and installation of new steel pole structures for the existing TL 695 and TL 6971 power lines. The operation and maintenance activities required for the power lines will not change from those currently required for the existing system; thus, no additional operation-related impacts related to noise will occur. Furthermore, maintenance will decrease slightly due to the removal of wood pole structures and the installation of steel pole structures. Therefore, the impact analysis is focused on construction activities that are required to install the new conductor, remove the existing wood pole structures, install the new steel pole structures, and establish required access and temporary work areas, as described in Chapter 3.0, Proposed Project Description.

#### **4.12.5.1 Methodology**

The noise analysis included a review of the City of San Clemente Centennial General Plan and Noise Ordinance, as well as general federal noise guidelines and available literature. Evaluation of potential noise and vibration impacts from the Proposed Project included examining typical noise levels and vibration associated with the proposed construction equipment and activities.

#### **4.12.5.2 Significance Criteria**

According to Section 15002(g) of the CEQA Guidelines, “a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project.” As stated in Section 15064(b) of the CEQA Guidelines, the significance of an activity may vary with the setting. The potential significance of project-related impacts related to noise were evaluated for each of the criteria listed in the checklist, as discussed below.

#### **Vibration Threshold**

This analysis uses the Federal Transit Administration's (FTA) vibration impact thresholds to determine whether groundborne vibration would be “excessive.” A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Consequently, the FTA recommends an 80 VdB threshold for infrequent events at residences and buildings where people normally sleep (e.g., the future on-site residences and the residences 500 feet southwest of the project site). In terms of groundborne vibration impacts on structures, the FTA states that groundborne vibration levels in excess of 100 VdB would damage fragile buildings and levels in excess of 95 VdB would damage extremely fragile historic buildings.

- a) **Would the project exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? Less than Significant**

Proposed Project construction is expected to take approximately nine months to complete. Each pole structure installation will include clearing of the sites, foundation excavation, concrete placement, steel pole structure installation, and conductor stringing. Construction of the components will require temporary usage of various types of noise-generating equipment, including graders, backhoes, rigging and mechanical trucks, air compressors and generators, cranes, and concrete trucks. Less frequently, helicopters will be used primarily for stringing.

#### **Construction Noise Sources**

Construction equipment will not generally be operated continuously, and equipment will not always be operated simultaneously. There will be times when no equipment is being operated and noise will be at ambient levels. Typical usage factors for this type of construction equipment were applied to sound levels in order to arrive at the average sound level that may occur during a typical workday. Usage factors are applied irrespective of workday duration. The usage factors account for the fact that equipment are not always operated at full throttle conditions, and are not used for an entire workday. Tables 4.12-3 and 4.12-4 show the adjusted exterior sound levels for a typical workday during construction of overhead and underground facilities, respectively. Construction sound levels are shown at expected various distances, covering the full range of distances to nearby sensitive receptors in the Proposed Project area (SDG&E 2014).

**Table 4.12-3. Overhead Line Construction Exterior Sound Levels Adjusted for Workday**

Equipment	Adjusted Noise Level for Workday (dBAA)				
	50 feet	100 feet	200 feet	500 feet	1,000 feet
Air Compressor	73	67	61	53	46
Aerial Bucket Truck	73	67	61	53	46
Backhoe	76	70	64	56	49
Crane	76	70	64	56	49
Bulldozer	81	75	69	61	54
Drill Rig/Truck-mounted Augur	78	72	66	58	51
Grader	75	69	63	55	48
Mower	75	69	63	55	48
Portable Generator	70	64	58	50	43
Rock Drilling Machine	74	68	62	54	47
Truck	81	75	69	61	54
Wire Pulling Machine	74	68	62	54	47
Helicopter at Takeoff	90	NA	NA	NA	NA

Note: NA = not available.

Source: SDG&E 2014.

**Table 4.12-4. Underground Line Construction Exterior Sound Levels Adjusted for Workday**

Equipment	Adjusted Noise Level for Workday (dBAA)				
	50 feet	100 feet	200 feet	500 feet	1,000 feet
Backhoe	74	68	62	54	47
Concrete Saw	83	77	71	63	56
Crane	73	67	61	53	46
Excavator	77	71	65	57	50
Jackhammer	78	72	66	58	51
Loader	75	69	63	55	48
Paver	74	68	62	54	47
Truck (dump, flatbed)	81	75	69	61	54
Vacuum Truck	81	75	69	61	54
Wire Pulling Machine	74	68	62	54	47

Source: SDG&E 2014.

#### *Helicopter Use*

Helicopters will be used as a construction tool for specific activities including (but not necessarily limited to) stringing of overhead conductor, installation or removal of structures, and transportation of equipment associated with the Proposed Project. SDG&E anticipates that light-, medium-, and/or heavy-duty helicopters may be required.

During stringing operations helicopters will be used to install the sock line that will pull in the conductor. Helicopter activities will be staged out of existing airports where possible, staging yards and ILAs, as needed. Most helicopter operations take only one day. Helicopter operations will be subject to applicable requirements for military Special Use Airspace at MCB Camp Pendleton.

The Proposed Project includes six temporary ILAs, which are used for short term helicopter operations, such as picking up conductor or other equipment. Helicopters may also operate within any of the six staging yards. Helicopters will be used during daylight hours, and flight paths will generally follow the existing power line alignment, except for ingress and egress from airports, ILAs and/or staging yards.

At take-off, a non-military helicopter has an adjusted workday dBA of 90 from 50 feet. Noise generated over an extended period of a hover operation can lead to low-frequency droning causing annoyance. Helicopters can operate on small landing sites that could be relatively close to residential communities, such as the Proposed Project's ILAs. This creates an immediate local environment of higher noise levels. However, other factors such as ground attenuation, altitude, duration of hover, and speed all affect helicopter noise levels. Typically, urban helicopter noise will not normally exceed a  $L_{eq}$  (24) of 65 to 70 dBA (FAA 2004).

### *Blasting*

If rock blasting is used during construction where solid rock is present and where the hydraulic rock drilling and splitting procedure will be ineffective, the following procedure will be used to minimize both drilling time and noise impacts. The procedure involves drilling approximately 3-inch-diameter blast holes to the full depth of the shaft and inserting explosives. Blasting caps are connected, and a non-electric detonator is employed. Flyrock protection is installed prior to blasting, and seismographs are placed to measure and record peak particle velocity and air blast levels at various distances from the blast site. If blasting is used with the Proposed Project, the blasting contractor will be required to obtain a blasting permit and explosive permit per applicable local regulatory ordinances.

### **Sensitive Receptors**

#### *Residential*

Quiet suburban areas typically have noise levels in the range of 40 to 50 dBA, while those along arterial streets are in the 50 to 60+ dBA range. Several residences are located immediately adjacent to the Proposed Project. The Proposed Project runs along the property boundaries of residential developments that are located on Avenida Santa Margarita and Avenida Cola. In addition, at the northern end of the Proposed Project area along Avenida Pico, the nearest City of San Clemente residences are located within 100 feet of an ILA and 150 feet of the Talega Staging Yard. Residents at 50 feet could experience exterior noise levels as high as 90 dBA (helicopter take off). More typical construction will generate exterior noise levels between 73 dBA and 75 dBA.

#### *Schools*

The closest school, San Onofre Elementary, is located approximately 0.16 mile from the Proposed Project alignment. Although no temporary construction facilities (such as staging yards or ILAs) will be placed near the school, students and school employees may still experience increased noise levels from typical construction activities. Concordia Elementary School is located approximately 0.24 mile from the Proposed Project in the City of San Clemente. While this school may experience construction noise from helicopter use, it is effectively screened from other sources of construction noise by the existing freeway noise barrier along the western side of I-5, which passes between the school and the Proposed Project.

#### *Parks*

Overhead reconductor routes run immediately adjacent to Vista Bahia Park and Richard T. Steed Memorial Park and cross the State Park Trail and Prima Deshecha South Trail (refer to Figure 4.15-1). Also, a construction staging yard will be established adjacent to Vista Bahia Park. Patrons at Surf Beach and San Mateo Campground may be exposed to increased noise levels from construction activities, including traffic noise from construction vehicles and noise from helicopter operations.

## Analysis

The San Clemente Noise Ordinance states that construction is exempt from noise provisions if activities only take place between 7:00 a.m. and 6:00 p.m. Monday through Friday and between 8:00 a.m. and 6:00 p.m. on Saturday.

As provided by the City noise ordinance, acceptable daytime exterior noise levels for residential uses range from 55 dBA to 60 dBA. The residential and recreation areas that would be affected by the Proposed Project would experience noise associated with overhead line construction. As shown on Table 4.12-3, construction sound levels would likely exceed the City's threshold at residences where construction would occur within less than 200 feet of a property line, if construction occurs outside of the construction work hours identified in the City noise ordinance.

Helicopter noise may not be considered a typical construction activity by the City of San Clemente, and may require an exception to the City's noise ordinance. SDG&E will implement APMs NOI-1 through NOI-3 to avoid or minimize construction noise impacts in the City of San Clemente. The construction schedule and activities will also be coordinated with the authorized officer of the California Department of Parks and Recreation to provide advance notice of the construction activities (refer to APM REC-01 in Section 4.15, Recreation).

In addition, work in the proximity of any single location of the Proposed Project will be temporary, as construction activities move along the corridor. The more intensive sources of noise such as from helicopters will occur intermittently and over short periods of time. If rock blasting is required, the construction contractor will ensure compliance with all relevant local, state and federal regulations relating to potential blasting activities, as well as SDG&E's blasting guidelines. Therefore, with implementation of standard operating procedures and APMs, and accounting for the relatively short-term duration of construction activities, noise impacts will be considered less than significant.

**b) Would the project result in exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels? Less than Significant**

Construction activities have the potential to generate low levels of ground borne vibration. Table 4.12-5 identifies various vibration velocity levels for the types of construction equipment that could operate at construction sites.

**Table 4.12-5. Vibration Levels for Construction Equipment**

Equipment	Approximate VdB		
	25 feet	50 feet	100 feet
Hoe Ram	87	78	69
Large Bulldozer	87	78	69
Drilling	87	78	69
Loaded Trucks	86	77	68
Jackhammer	79	70	61
Small Bulldozer	58	48	39

Source: FTA 2006.

Based on the information in Table 4.12-5, vibration levels could reach approximately 78 VdB at the nearest residence, approximately 50 feet away. This would not exceed the FTA's threshold of 83 VdB for buildings with primarily daytime uses. Vibration levels as a result of construction will generally be below the level needed to perceive vibration for most people. In addition, it is anticipated that construction of the Proposed Project will not involve the use of ramming equipment, which tend to result in higher vibration levels.

Vibration levels associated with rock blasting, if conducted, will be site-specific and depend on soil/rock conditions at the site, the amount of explosive needed, and the depth that the blasting occurs. The construction contractor will ensure compliance with all relevant local, state and federal regulations relating to potential blasting activities, as well as SDG&E's blasting guidelines. Therefore, the potential vibration impacts as a result of construction will be less than significant.

**c) Would the project result in substantial permanent increase in ambient noise levels in the project vicinity above levels without the project? No Impact**

Construction activities will be temporary, performed over approximately nine months. Therefore, no permanent increase in ambient noise levels will occur, and there will be no impact.

**d) Would the project result in substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? Less than Significant**

Impacts during construction have been addressed in response to criterion a) above. Construction activities along the Proposed Project route will result in short-term noise impacts. However, such impacts will be temporary, localized and intermittent. As described in Section 4.12.4, SDG&E will implement APMs to avoid or minimize noise impacts. Therefore, construction impacts of the Proposed Project will be less than significant.

**e) Would the project be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? No Impact**

The nearest public airport is the Oceanside Municipal Airport, which is approximately 16 miles away from the nearest portion of the Proposed Project alignment. The Marine Corps Air Station Camp Pendleton airport is located approximately 13 miles from the nearest portion of the Proposed Project alignment. Since no airport is within two miles of the Proposed Project and therefore, not within an airport land use plan, the Proposed Project will not result in exposing people in the project area to excessive noise levels. Therefore, no impact will occur.

**f) Would the project be within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? No Impact**

The Proposed Project is not located within the vicinity of any private airstrips. It is not anticipated that the Proposed Project would utilize private airstrips for construction. If the Proposed Project were to utilize a private airstrip, such utilization would not expose people residing or working in the area to excessive noise levels, as discussed under criterion a) above. Therefore, no impact will occur.

#### 4.12.6 References

- California Department of Parks and Recreation. 2015. Online at [http://www.parks.ca.gov/?page\\_id=21300](http://www.parks.ca.gov/?page_id=21300). Accessed on November 10, 2015.
- California Department of Transportation (Caltrans). 2004. Transportation- and Construction-Induced Vibration Guidance Manual. June 2004.
- City of San Clemente. 2014. Centennial General Plan, Safety Element. February 2014.
- City of San Clemente. 1996. San Clemente Municipal Code 1996, as modified.
- Department of Parks and Recreation. 1984. San Onofre State Beach Revised General Plan. June 1984.
- Federal Aviation Administration (FAA). 2004. Report to Congress, Nonmilitary Helicopter Urban Noise Study. December 2004.
- FHWA. 2006. FHWA Roadway Construction Noise Model User's Guide.
- San Diego Gas & Electric (SDG&E). 2014. Proponent's Environmental Assessment (Part A) for the Sycamore to Peñasquitos 230kV Transmission Line Project. April 2014.
- U.S. Federal Transit Administration, Office of Planning and Environment. 2006. Transit Noise and Vibration Impact Assessment. May 2006. Online at [http://www.fta.dot.gov/documents/FTA\\_Noise\\_and\\_Vibration\\_Manual.pdf](http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf). Accessed September 15, 2015.

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