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3.0 PROPOSED PROJECT DESCRIPTION

3.1 PROPOSED PROJECT OVERVIEW

SDG&E is a regulated public utility that provides electric service to three million customers within a 4,100 square mile service area, covering parts of two counties and 25 cities in the San Diego area. In an effort to maintain existing electric power tie lines in high fire and wind areas in SDG&E's service territory, SDG&E proposes to replace wood poles with steel poles along approximately 14 miles of TL 637, extending from the existing Creelman Substation to the existing Santa Ysabel Substation (Proposed Project).

The Proposed Project would include the following primary components, which are described in more detail in Section 3.3:

- Replacement of approximately 156 existing wood poles with new steel poles between the Creelman and Santa Ysabel Substations (including distribution line underbuild),
- Addition of new fiber optic cable (SDG&E owned and operated) to be co-located on the rebuilt TL 637 pole line between Creelman and Santa Ysabel Substations and relocation of small amounts of existing private fiber optic lines on approximately 21 poles, and
- Minor work at the Creelman and Santa Ysabel Substations to allow for connection of the relocated TL 637 and underbuilt distribution line.

The CPUC will be the lead agency for the Proposed Project under CEQA. SDG&E is submitting this PEA (Volume II of II) in support of its Application (Volume I of II) for a Permit to Construct (PTC).

3.2 PROPOSED PROJECT LOCATION, REGIONAL CONTEXT, AND REGIONAL ELECTRIC SYSTEM

As shown in Figure 3-1, Project Vicinity Map, the Proposed Project components are located in the unincorporated communities of Ramona and Santa Ysabel, San Diego County, California. Specifically, TL 637 traverses densely vegetated and fire-prone areas on private and public lands, including lands owned by the County of San Diego, U.S. Bureau of Land Management (BLM), and a small portion of Cleveland National Forest. TL 637 is a 69kV, predominantly single-circuit power line that connects the existing Creelman and Santa Ysabel Substations. A small portion of the TL 637 pole line is shared with TL 626, another existing 69kV wood power line, near the Santa Ysabel Substation. These approximately 12 poles are double-circuit, supporting both TL 637 and TL 626.[1]

[1] SDG&E has filed a separate application for a Permit to Construct that would authorize the replacement of TL 626 (A.12-10-009). If CPUC authorizes the replacement of these 12 poles in connection with A.12-10-009 before a decision is rendered in this proceeding, the 12 poles will not need to be replaced again in connection with the TL 637 project.

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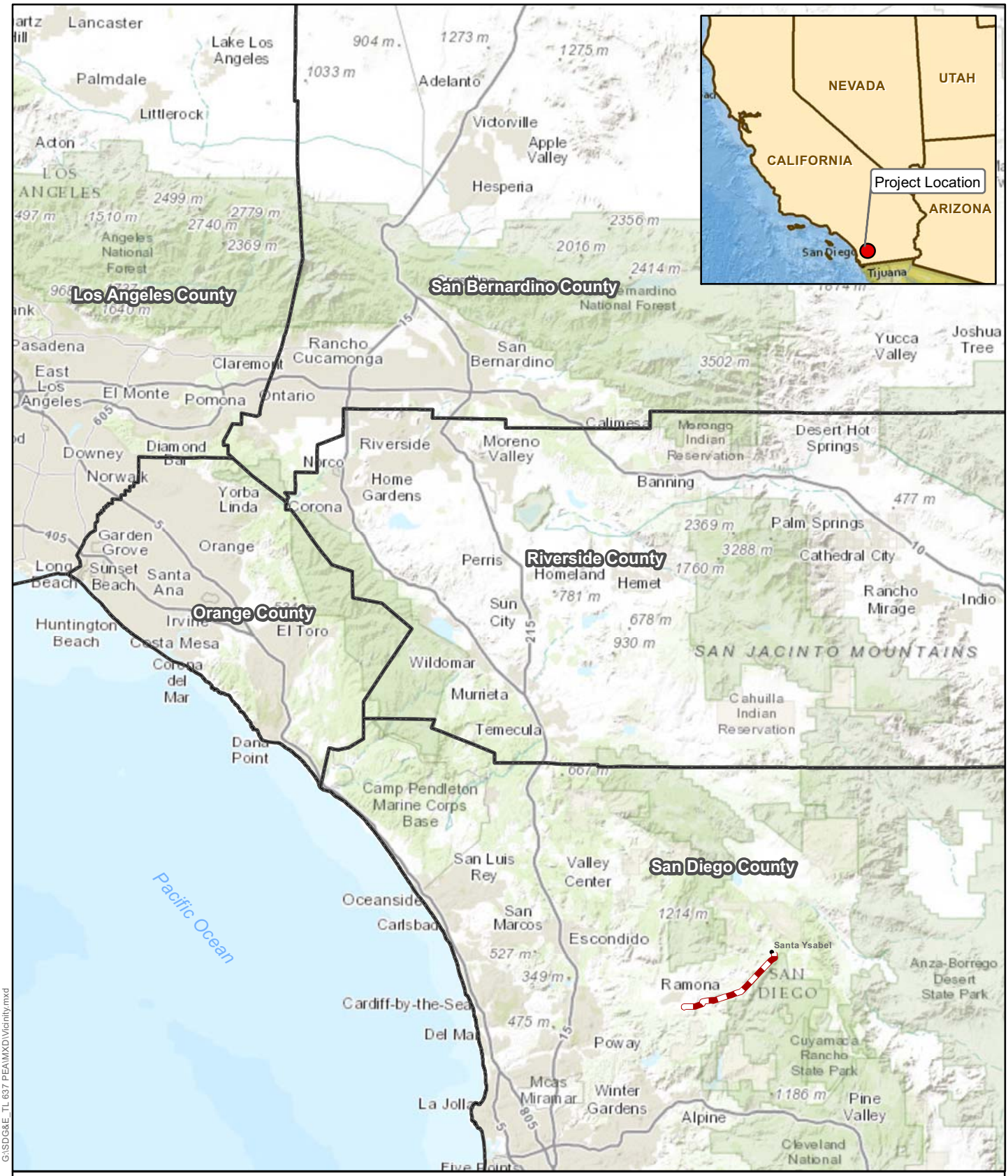

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Tie-Line 637 Wood-To-Steel Project

Project Vicinity Map

Figure 3-1

Created For: Brad Carter

Created By: TRC

Date: 2/15/2013

SDG&E is providing this map with the understanding that the map is not survey grade.

Project Location

0 7 14 21 Miles

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Sources: SDG&E, 2012; Esri, 2012

SDGE A Sempra Energy utility

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BACK OF FIGURE 3-1

3.3 PROPOSED PROJECT FACILITIES

Specifically, SDG&E is proposing the following as part of the Proposed Project:

- Replacement of approximately 156 wood power line and interset distribution structures with approximately 156 weathering steel structures.[2] Of the 156 replacement structures, approximately 69 will be directly-embedded steel poles and approximately 87 will be engineered steel poles supported by micropile foundations.
- Approximately 16 small sections of new underground distribution line.
- Removal (without replacement) of approximately eight existing wood structures, including one stub pole, five distribution poles, and two 69kV poles.
- Pole top only work at approximately three existing structures.
- Topping one pole above existing communication infrastructure.
- Installation of fiber optic on the entire power line. Undergrounding of fiber optic at the Creelman and Santa Ysabel Substations, including anchor installation for one pole at the Santa Ysabel Substation.
- Relocation of approximately 1,170 feet of existing 69kV power line that currently crosses a wet meadow to a new location adjacent to an existing access road.
- Reconductoring of the entire power line from 3/0 aluminum conductor steel reinforced/alumoweld (ACSR/AW) to 636 aluminum conductor steel support/alumoweld (ACSS/AW) conductor.
- Utilization, as needed, of approximately 22 temporary stringing sites. These may be approximately 150 foot by 14 to 150 foot, depending on pole location and site constraints.
- Installation of approximately 10 temporary guard structures to avoid construction hazards where conductor crosses roads.
- Utilization, as needed, of approximately six temporary staging yards/helicopter landing zones.

Each of these general Proposed Project components is discussed in detail within the following subsections.

3.3.1 TL 637 Wood-to-Steel Replacement

As stated above, the existing wood poles along the approximate 14 mile TL 637 between the existing Creelman and Santa Ysabel Substations will be replaced with new weathering steel poles. Three types of poles will be used for the Proposed Project: direct-embedded weathering steel poles, direct-embedded modified weathering steel poles, and engineered weathering steel poles supported by micropile foundations. Existing wood poles will be completely removed and the holes backfilled with soils from the pole replacement, with the exception of Pole Nos. R107 and P54. At these locations the existing poles will be cut at ground level and the remainder of

[2] It is important to note that work completed under the Corrective Maintenance Program will continue, as warranted, where existing poles are identified that need to be replaced.

the pole will be left in place to avoid impacts to sensitive resources. Additional poles may also be cut at ground level where it is determined that complete removal of the existing pole would result in additional, adverse disturbance. Soil will not be taken from the surrounding areas to fill the holes. If additional backfill material is required, clean, decomposed granite will be used to backfill the old pole holes. Excess soil from the new holes will be placed on top of the decomposed granite.

Replacement poles will be located as close as possible to the existing poles, typically within 6 to 8 feet, with the exception of three poles (Pole Nos. P20, P54, P114) which will be replaced in-line up to approximately 200 feet from the existing pole location. In addition, approximately 1,170 feet of the power line located in a meadow between poles P103 and P105 will be relocated north adjacent to a nearby existing dirt access road. The replacement poles will be installed by line truck or by helicopter. Excess spoils generated from project activities will be dispersed around the bases of the poles within the allotted temporary work areas and/or evenly distributed on the existing access roads and properly compacted. In the event that the soil cannot be spread and adequately contoured or compacted on existing access roads, crews will remove the excess soil from the project site. Replacement poles will include galvanized pole steps if the pole locations are not accessible by a 24-hour all weather access road.

Appendix 3-A, Pole Detail Table, provides a list of the proposed new 69kV poles by type (all new 69kV poles will be steel) and all wood poles to be removed (including replacements and poles being removed from service). Appendix 3-B, Detailed Route Map, provides a map with the location of all to be removed and installed. Typical drawings and/or representative photographs of the types of structures to be installed and removed are included in Appendix 3-C, Typical Structure Diagrams and Photographs.

In general, the new 69kV steel poles (both direct bury and micropile) will range in height from approximately 43 feet to 110 feet and will be located on average approximately 480 feet apart depending on the topography of the route. The minimum height of the new 69kV conductor will be approximately 41 feet above ground level. The new poles will taper to approximately 14-inches at the top of the poles. The average overall height increase is approximately 12 feet (19 percent) to allow for increased vertical spacing between conductors in accordance with current design standards. The above-stated averages include only the height increases for the pole replacements over the entire Proposed Project and have not been adjusted to include the poles that are being removed from service. The anticipated maximum pole height increase will be approximately 40 feet for the overall Proposed Project, excluding the one new pole on the power line (90 feet). All poles will be constructed to current SDG&E standards, including design standards for avian protection.

The following subsections provide a detailed description of the scope of work for each element of TL 637 wood-to-steel component of the Proposed Project.

3.3.1.1 Directly-Embedded Steel Poles

The directly-embedded steel poles are light-duty and modified weathering steel poles are heavy-duty directly-embedded steel poles that are secured using a concrete backfill. The poles will range in heights above grade of approximately 43 to 79 feet. The diameter of the pole at ground level is approximately 30 inches in diameter for light-duty poles and approximately 42 inches for

modified weathering steel poles. The poles will be directly-embedded at a depth of approximately 7 to 16 feet as necessary for installation. This type of pole will be used at approximately 29 locations for light-duty steel poles and 40 locations for the modified, heavy-duty steel poles.

3.3.1.2 Micropile Foundation Engineered Steel Poles

Micropile foundation poles are engineered steel poles that are anchor-bolted to a foundation utilizing micropile technology. The engineered poles utilize a thicker gauge steel and a transition plate bolted to micropiles, which allows for the elimination of guying and associated anchorage, and minimizes ground disturbance to install foundation poles. The poles have a height above grade of approximately 55 to 110 feet. A steel transition plate is installed above the micropile foundation to act as the base foundation for an engineered steel pole. The combined dimensions of the micropile foundation and pole are expected to be no more than 8 feet in diameter. This type of pole will be used at approximately 87 locations along the Proposed Project route.

3.3.1.3 Distribution Underbuild

Existing distribution lines are currently underbuilt through portions of the TL 637 route between the Creelman and Santa Ysabel Substations. These distribution lines will be transferred to the new TL 637 poles along with the new 69kV conductor, again in an underbuild position. In addition, existing distribution line circuits that are currently located on distribution only structures will be moved to an underbuild position on the new TL 637 structures. This consolidation will result in a net reduction in the number of structures and will mainly take place along Creelman Lane (refer to Appendix 3-B) where the distribution structures are located on the north side of Creelman Lane and the TL 637 alignment (existing and proposed) is located on the south side of Creelman Lane. The distribution lines will be installed in an overhead position throughout the majority of the TL 637 route, however, small portions of underground distribution line installation will be required (refer to Appendix 3-A and 3-B) where existing underground circuit must be relocated to the new pole location. In addition, a vacant distribution position will be added for Pole No. P47 through TL 637's connection with the Santa Ysabel Substation, in an overhead position. This vacant distribution position is being created to support potential future distribution line needs in the Proposed Project area.

Trenching for underground distribution will typically be performed within a 10-foot radius of the pole. The new underground distribution lines will be installed using approximately 5-inch conduits, with typically 2-12 conduits per trench. A typical sketch of a distribution line duct bank (trench package) is included within Appendix 3-C. However, trenching outside of the radius may be necessary at some locations and is accounted for as temporary impacts. In addition, hand holes will be installed along the trenching alignment.

3.3.1.4 Reconductoring

Once the new poles have been installed, new conductor will be installed on the new poles. The existing TL 637 power line is comprised of 3/0 ACSR/AW conductor. The new TL 637 will utilize 636 ACSS/AW conductor, which is the current standard conductor type for 69kV power lines. As noted above, approximately 12 poles along the TL 637 route (near the Santa Ysabel Substation) are shared structures (double-circuit) with TL 626, another existing 69kV power line.

Therefore, when this segment of TL 637 is replaced with the new steel poles and reconductored, SDG&E will evaluate the need to reconductor this segment of TL 626 at the same time that the poles are replaced. If it is reasonable and prudent to reconductor this segment of TL 626, the TL 626 conductor positioned on these poles will be reconductored to 636 ACSS/AW. If it is not reasonable and prudent to reconductor this segment of TL 626, SDG&E will re-install the existing TL 626 conductor on the new steel poles.

3.3.1.5 Communications Infrastructure

Private communications companies currently utilize a number of the poles on TL 637 to hold communications infrastructure (e.g., cable TV and/or telephone). This infrastructure will have to be re-located to the new steel poles following construction of the Proposed Project. The affected poles are located at/near the Creelman Substation (substation plus approximately 20 poles east of the substation) and at the Santa Ysabel Substation (approximately one pole only located at the substation).

During construction, SDG&E will attempt to coordinate with representatives of the non-SDG&E utilities to coordinate the transfer of their attachments to the new steel poles within approximately 45 days from the transfer of SDG&E conductors to the new poles.

3.3.1.6 Temporary Poles

There are approximately seven pole structures along the TL 637 route alignment that require same hole sets for the poles. At these locations, the new steel pole will ultimately be located in the same location as the existing wood pole. In order to complete construction at these locations, temporary poles will be installed adjacent to the existing poles in order to provide adequate electric power reliability during construction. These temporary poles will be utilized until the new TL 637 line is complete and the existing poles can be removed. Once the existing poles are removed, the new steel pole can be installed at the existing pole location and the conductor will be transferred from the temporary pole to the new steel pole. The temporary pole is then removed and construction is complete. Installation of temporary poles will require anchors and utilization of concrete block sleds for temporary guying.

3.3.1.7 Grounding Rods

All of the steel poles, regardless of foundation type, will require the installation of two grounding rods buried approximately 8 to 18 inches deep and 4-inches wide. The grounding rods are approximately 8 feet in length and will be installed approximately 6 feet apart within the established work areas described in Sections 3.4.1 and 3.4.2. Permanent impacts associated with the grounding rod installation will be negligible (e.g., less than 1 square foot per structure).

3.3.2 Substations

Work will be required at both the Creelman and Santa Ysabel Substations to allow for the wood-to-steel conversion of TL 637 that is the main component of the Proposed Project. The required work at the substations will be relatively minor and will not require the addition, subtraction, or re-location of major equipment. Furthermore, all required work will be located within the existing substation property line and existing fence line. A detailed description of the substation work is provided below for each affected substation.

3.3.2.1 Creelman Substation

The following work is required in and around Creelman Substation to support the installation of one new 48 strand All-Dielectric Self Support (ADSS) Single-Mode Fiber (SMF) on TL637:

1. Trench for 60 feet and install one 4 inch schedule 40 polyvinyl chloride (PVC) conduit from Pole No. P2 (located outside 10 feet east fence line), to existing PB No. 2 (located in the southeast corner of the yard).
2. At Pole No. P2 route new ADSS SMF through the new conduit to PB No. 2, leave 50 feet of slack coiled and stored, and continue routing fiber through existing conduit to the control house.
3. Inside the control house, route new ADSS SMF in the overhead cable tray to the telecommunications rack labeled "TC-1."
4. At TC-1 install new AFL 2U 48 Port Fiber Panel, and terminate all 48 SMF strands to factory installed "pig-tails" using Single Fusion Splice Method.
5. Label and tag fiber at every access point, hand-hole and pole attachment with "S-4" tags.

3.3.2.2 Santa Ysabel Substation

The following work is required in and around the Santa Ysabel Substation in order to support the installation of one new 48 strand ADSS, SMF on TL 637:

1. Trench for 100 feet and install one 4-inch schedule 40 PVC conduit from Pole No. D182 (located outside yard 100 feet south of fence line), to new 3313 hand-hole (located outside yard 5 feet south of fence line).
2. Install one new 3313 hand-hole (located outside yard 5 feet south of fence line).
3. Trench for 100 feet and install one 4 inch schedule 40 PVC conduit from new 3313 hand-hole (located outside yard 5 feet south of fence line), to control house west wall, and provide building entrance at overhead cable tray elevation.
4. At Pole No. D182 route new ADSS SMF through the new conduit to new 3313 hand-hole, leave 50 feet of slack coiled and stored, and continue routing fiber through new conduit to the control house.
5. Inside the control house, route new ADSS SMF in the overhead cable tray to the telecommunications rack labeled "TC-1".
6. At TC-1 install new AFL 2U 48 Port Fiber Panel, and terminate all 48 SMF strands to factory installed "pig-tails" using Single Fusion Splice Method.
7. Label and tag fiber at every access point, hand-hole and pole attachment with "S-4" tags.

3.3.3 New SDG&E Fiber Optic Line

SDG&E is proposing to install a new SDG&E owned and operated fiber optic cable between the Creelman and Santa Ysabel Substations. This new fiber optic line will be installed on the new TL 637 steel poles and will be utilized to transfer information between the two substations. The

fiber optic is an appurtenance to the power line, and is being installed for SDG&E use only. The fiber optic line will allow for the use of the latest substation relay technology, allowing for quicker trip operations and improved relay coordination. The new SDG&E fiber optic cable will be 48 count ADSS fiber optic cable with a diameter of approximately 17 millimeters.

The new fiber optic cable will require minor trenching at two pole locations (Pole Nos. P2 and D182) and within the two substations, but will otherwise be installed in an overhead position on the new TL 637 poles. The areas of required fiber optic trenching are depicted on the Detailed Route Map that is included as Appendix 3-B.

3.4 CONSTRUCTION METHODS

This section includes an overview of the typical methods that will be used for construction of the Proposed Project. Specifically, this section describes typical construction methods for overhead and underground facilities, pole types, construction equipment, and temporary construction work areas. It is anticipated that construction of the Proposed Project will result in approximately 520 cubic yards of excavation for direct-embed and micropile foundation poles. In addition, construction is anticipated to require approximately 28 cubic yards of cut and 7 cubic yards of fill for preparation of micropile construction platforms (see Section 3.4.1 below) and installation of one small retaining wall near Pole No. D167. Finally, trenching of fiber optic and distribution lines is anticipated to result in approximately 77 cubic yards of excavation. Actual cut, fill, and excavation amounts may vary dependent upon actual field conditions. SDG&E is typically able to re-use soil on site during wood-to-steel projects, like the Proposed Project, where extensive grading and excavation is not required. Excess soil from excavation of trenches or new pole installations may also be transported to a local recycling or appropriately permitted waste disposal facility if the soil is not re-used onsite or otherwise recycled. Excess soil will be re-used onsite wherever possible and only transported offsite as the final option. SDG&E's construction methods are subject to implementation of the SDG&E's standard environmental procedures and protocols, including *SDG&E's Subregional NCCP,* which is described in greater detail in Section 4.4, Biological Resources, and below (see Sections 3.7 and 3.8). SDG&E has successfully implemented the NCCP for projects such as the Proposed Project for nearly two decades.

3.4.1 Micropile Construction

Micropile foundation installation will be utilized due to existing soil conditions (presence of rock), pole site access limitations, and to minimize ground disturbance. In order to complete the micropile installation process, special proprietary drill rig platforms and componentized drilling rigs are flown or driven to the site and set up over the foundation at the structure site. High pressure and volume air compressors, a grout plant or grout transfer unit, tool boxes, personnel work platforms, firefighting equipment, and installation materials are also flown or driven to the pole locations. Equipment has been designed to be securely leveled on steep slopes or uneven terrain without the need for excessively benched excavations. Standard Penetration Tests (SPTs) are typically performed at specific elevations in order to characterize the soil conditions while the first micropile foundation is being drilled. SPT values are input into the foundations schedule, which acts as a decision matrix for properly constructing the foundation in order to match tower loading and soil conditions. The foundation schedule provides guidance in determining the number of piles necessary, the length of casing embedment, the bond length, and

the grouting method to be used in the installation of each pile. The drill platform, drill rig, and other materials are moved to each subsequent micropile foundation location along the Proposed Project ROW. Micropile foundations will be used at approximately 87 pole locations.

Each micropile will require a hole approximately 6 to 9 inches in diameter. The actual diameter and number of these holes per foundation will vary, depending on the pole design requirements. Typically 4 to 16 holes are drilled per pole foundation. The depth of the holes will vary, based on the design requirements and the underlying soil and rock properties at each micropile foundation location.

A combination of construction platforms may be used at each micropile foundation structure site, depending on terrain and site conditions. These platforms may consist of the following approximations:

- Drill rig platform: 8 feet by 8 feet (64 square feet)
- Three personnel deck platforms: 8 feet by 8 feet (64 square feet)
- Firefighting equipment platform: 8 feet by 8 feet (64 square feet)
- Grout platform: 8 feet by 8 feet (64 square feet)
- Air compressor platform: 16 feet by 8 feet (128 square feet)

Each platform listed above is supported by approximately four adjustable legs, and each leg requires an approximately 2-foot by 2-foot level pad on the ground surface. Additional temporary impacts at each site may include footpaths to remote helicopter pole set locations.

The volume of material permanently excavated from each micropile foundation site generally is 4 yards for 10 of the 8-inch diameter holes, all drilled to 30 feet deep. This material can be both spread and compacted on adjacent access roads or removed to an appropriate offsite disposal facility. The grout used in the micropile foundation process consists of a combination of water, Portland cement, and sand. All unused grout will be safely stored and removed to an appropriate offsite storage or disposal facility.

Permanent impacts associated with the micropile foundation poles are based on an average 7 foot diameter micropile cap plate. Permanent impacts for each foundation are estimated at approximately 39 square feet. The temporary impact area for each micropile foundation will include the setup for all platforms and equipment within an area approximately 1,250 square feet (20-foot radius), most of which will not be disturbed. The platforms will be positioned at each site to accommodate the terrain and to avoid/minimize disturbance to tall patches of native vegetation to the greatest extent possible.

3.4.2 Weathering Steel Pole Construction (Directly-Embedded)

Permanent impacts resulting from the installation of light-duty steel poles were calculated with an assumption that each pole location would require up to an approximately 54-inch diameter hole for the replacement pole and that each pole would measure up to 30 inches in diameter at ground level, which would result in an approximately 5 square feet permanent impact per pole for the pole alone. Permanent impacts resulting from the installation of heavy-duty steel poles were calculated with an assumption that each pole location would require up to an approximately

66-inch diameter hole for the replacement pole and that each pole would measure up to 42 inches at ground level, which would result in an approximately 10 square feet permanent impact for the pole alone. Permanent impacts for light- and heavy-duty steel poles are only calculated for the area of the pole alone. As all light- and heavy-duty poles will be backfilled with concrete, there will be an additional permanent impact surrounding the pole resulting from the concrete backfill. As terrain will vary between pole replacement locations, and pole diameter at the base will vary between pole replacement locations, these additional permanent impacts cannot be accurately estimated at this time. Actual permanent impacts from both the pole and the concrete backfill surrounding the pole will be assessed in the post-construction report, and addressed through credit withdrawal from the SDG&E mitigation bank where appropriate.

The replacement poles would be located as close as possible to the existing poles, generally within 6 to 8 feet, with the exception of the consolidation along Creelman Lane and the segment of relocated power line to avoid sensitive environmental areas (wet meadow).

To install the directly-embedded steel poles, pole holes will be excavated using a drill rig mounted on the back of a truck or by hand with the aid of a hand jack powered by an air compressor. The temporary work area would be confined to the existing disturbed area around the base of the pole as much as possible (i.e. within a 10-foot radius). Plywood boards and plastic covering would be used to cover the excavated holes until pole installation activities begin. The excavated soil would be temporarily stockpiled adjacent to the excavated hole within the temporary work area. Once the pole bases are installed, concrete will be used to backfill the holes. Crews will spread and compact excess soil as close to the pole as possible (i.e., within 10 feet of the pole). Soil would be compacted using tamping equipment or hand tools to minimize the potential for erosion. Excess soil may also be dispersed evenly and compacted onto existing unpaved access roads in which vehicle accessibility will be maintained. The appropriate Best Management Practices (BMPs) would be used before, during, and after all project-related construction activities where necessary to prevent offsite sedimentation.

3.4.3 Pole Removal

Pole removal activities will utilize boom and bucket trucks, and a helicopter to remove cross arms, conductors, and poles. Associated hardware, including anchors and old wood poles, will be recycled and/or disposed of at an approved offsite location. Appendix 3-C shows typical wood poles and a wood pole line that currently exists. A list of poles, detailing the proposed action for the poles (replace, remove, access only) and construction notes for each pole, is included in Appendix 3-A. In addition, approximately eight poles are proposed to be removed from service without being replaced as part of the Proposed Project.

3.4.4 Guard Pole Installation

Temporary guard structure installation will occur in locations within the 14-mile Proposed Project alignment where stringing work will cross existing facilities such as other utilities, roadways, and highways to assure minimum clearances are maintained while conductors are being pulled. Different types of guard structures may be used, depending on the site conditions. Guard structures may consist of a single wood pole with a cross-beam attached to side extensions or a two-pole wood structure with a cross-beam. In many locations, such as paved areas, a boom or bucket truck will be used as a guard structure. The guard structures will require excavating

the pole holes using a truck-mounted auger. The poles will be installed using a line truck, and the soil will be backfilled around each pole. Upon completion of overhead construction, these guard structures will be pulled and removed from the project site; and the holes will be backfilled. Approximately ten wooden guard structures will be utilized on the project at locations where the TL crosses public roads. The guard structures are necessary to provide for safety while conductor is pulled through the line.

3.4.5 Conductor Stringing

Once the new poles have been installed, a mechanical pulling machine (powered dolly) and/or helicopter will be used to facilitate the installation of new conductors. Wherever possible, activities will occur within existing paved or unpaved access roads or other previously disturbed areas.

Conductor stringing operations begin with the installation of travelers or "rollers" on the bottom of each of the insulators. The rollers allow the conductor to be pulled through each structure until the entire line is ready to be pulled up to the final tension position. Following installation of the rollers, a sock line (a small cable used to pull the conductor) is pulled onto the rollers from structure to structure. Once the sock line is in place, it is attached to the conductor and used to pull or "string" the conductor into place on the rollers using conventional tractor-trailer mounted pulling equipment located at pull and tension sites ("stringing sites") along the line. The conductor is pulled through each structure under controlled tension to keep it elevated and away from obstacles, thereby preventing third-party damage to the line and protecting the public. After the conductor is pulled into place, the sags between the structures are adjusted to a recalculated level. The conductor is then clipped into the end of each insulator, the rollers are removed, and vibration dampers and other accessories are installed.

3.4.6 Dewatering

Based on the geotechnical investigation completed by VO Engineering on the Proposed Project, at least six micropile locations are expected to encounter groundwater during micropile drilling operations. Standard practice for micropile installation when encountering water would be to expel any standing water in the hole by use of compressed air. If this approach does not allow for a dry hole during placement of the grout, the water will be left and will be displaced during grout placement. The contractor will use a tremie tube to place the grout by pumping from the lowest point of the drill hole with continuous injection until uncontaminated grout flows out the top of the pile. The overflow water and grout will be locally contained on site around each pile and allowed to dry prior to disposal. After drying, the grout will be removed and properly disposed of. If the water flow is too heavy to allow for drying, the overflow will be stored on site in metal drums and removed from the site. Drums will be properly identified as to their contents and waste materials will be disposed at an approved landfill or through a waste collection company.

Other dewatering is not anticipated, but may be required based on weather conditions during construction. If necessary, trenches and other excavation sites will be dewatered using a portable pump and disposed of in accordance with relevant regulations and permits.

3.4.7 Blasting

If rock is encountered during pole excavation, a hydraulic rock drilling and splitting procedure (rock-splitting) may potentially be used to minimize drilling time, depending on site specific conditions. The procedure involves drilling a hole in the rock and inserting a non-blasting cartridge of propellant. The cartridge is mechanically initiated by an impact generation device. This hydro-fracturing effect causes controlled tensile crack propagation in the rock and does not result in flyrock, noxious fumes, or ground vibrations.

In the unlikely event that rock blasting may potentially be used to excavate pole locations along the power line that are solid rock, and where the hydraulic rock drilling and splitting procedure would be ineffective, the following procedure would be utilized. The procedure would minimize both drilling time and noise impacts. The blasting 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. Dust control would include a combination of steel plate covering, geo-textile fabric with chain link fence covering, and wetting the blasting surface. If blasting is utilized with the project, the blasting contractor will be required to obtain a blasting permit and explosive permit per the San Diego County Regulatory Ordinances. The appropriate BMPs will be used before, during, and after all project-related construction activities where necessary to prevent erosion and offsite sedimentation.

3.4.8 Underground Distribution and Fiber Optic Lines

New underground construction for distribution and fiber optic lines will be conducted utilizing an open trench method. Prior to trenching for underground distribution lines or fiber optic cable, SDG&E will notify other utility companies (via Underground Service Alert) to locate and mark existing underground utilities along the proposed underground alignments. Exploratory excavations (potholing) will also be conducted to verify the locations of existing facilities in the field, if necessary.

Trenches will be excavated using a backhoe, saw cutter, and other trenching equipment as warranted by site conditions. The depth of the trench will be determined by localized topography and potential conflicts, but is anticipated to be approximately 5 to 6 feet deep, with a width of approximately 2.5 feet. Dewatering of the trenches is not anticipated, but may be required based on weather conditions during construction. If trench water is encountered, trenches will be dewatered using a portable pump and disposed of in accordance with relevant regulations and permits (refer to Section 3.4.6). Once installed, the depth from grade to the top of the concrete duct package will be approximately 2.5 feet, and the depth from grade to the top of the conduit in the duct package will be approximately 3 feet. The trench alignment will proceed to/from cable poles or splice vaults, as applicable.

The previously excavated native material will be used to backfill the trench after installation of the concrete duct banks. SDG&E does not anticipate that engineered backfill will be required. The remainder of the excavated material will be spread across the ROW or access roads, if possible, or disposed of at an approved facility. SDG&E does not anticipate encountering contaminated soils (see Section 4.7, Hazards and Hazardous Materials).

The PVC cable conduits for underground distribution lines will be installed (separated by spacers), and concrete will be poured around the conduits to form the duct banks after trenching activities for the underground duct banks have been completed. The trenches will be backfilled with these materials and the cables will be installed in the duct banks upon completion of the duct bank installation. Each cable segment will be pulled into the duct bank and terminated at the cable pole where the line converts to an overhead configuration. A cable reel will be placed at one end of the section and a pulling rig at the other end to pull the cable through the ducts. A larger rope will then be pulled into the duct using a fish line and attached to the cable puller, which pulls the cable through the duct. Lubricant will be applied to the cable as it enters the duct to decrease friction during pulling.

3.4.9 Temporary Work Areas

Work areas for each type of pole will vary but will be confined to the previously disturbed areas around the bases of the existing poles to the extent possible in order to provide a safe and adequate workspace. Temporary work areas also include storage yards, helicopter landing zones, temporary construction access, and stringing sites. Each of these temporary work areas are described below.

During construction, alteration to the temporary work spaces may be required to accommodate construction activities. Any necessary changes will be evaluated per *SDG&E's Subregional NCCP*, the Proposed Project Stormwater Pollution Prevention Plan (SWPPP), and for cultural resources in order to avoid impacts to sensitive resources and to identify any necessary changes to the SWPPP.

3.4.9.1 Materials Storage, Staging, and Helicopter Landing Zones

The Proposed Project includes approximately four temporary construction staging yards and two potential helicopter landing zones (refer to Appendix 3-A and 3-B), resulting in a total area of approximately 15.1 acres. The helicopter landing zones will be utilized for helicopter take-offs and landings and the staging areas will be used for refueling areas for vehicles and construction equipment by a mobile fueling truck, pole assemblage, open storage of material and equipment, construction trailers, portable restrooms, parking, and lighting and may include generator use for temporary power in construction trailers. The staging yards may also be used as helicopter landing zones. Construction workers typically meet at the staging yard each morning and park their vehicles at the yard. In-ground fencing will be installed at the staging yards.

Warnock Staging Yard

The Warnock Staging Yard is approximately 258,311 square feet (5.93 acres). The site is located at the corner of Keyser and Warnock Roads in the unincorporated community of Ramona and can be accessed via either road.

Creelman Staging Yard

The Creelman Staging Yard is approximately 43,560 square feet (1 acre). The site is located on SDG&E-owned land at the corner of Creelman Lane and Ashley Road in the unincorporated community of Ramona and can be accessed via Ashley Road.

Woodlot Staging Yard

The Woodlot Staging Yard is approximately 27,000 square feet (0.62 acres). The site is located in a cleared storage lot off an access road. It can be accessed by either of two existing private roads from California State Route Highway (Hwy) 78 in the unincorporated community of Santa Ysabel.

Santa Ysabel Staging Yard

The Santa Ysabel Staging Yard is divided into two areas by an unpaved private road. The total area is approximately 283,140 square feet (6.5 acres). The largest area is located east of the private unpaved road leading off Grutly Street and is approximately 226,512 square feet (5.2 acres). The smaller area is west of the private unpaved road and is approximately 56,628 square feet (1.3 acres). The site is located on Grutly Street in the unincorporated community of Santa Ysabel and can be accessed via Washington Street from Hwy 78. The Santa Ysabel Staging Yard may also be used to stage helicopter operations.

Mt. Gower Helicopter Landing Zone

The Mt. Gower Helicopter Landing Zone (HLZ) is approximately 75 feet by 75 feet with a total area of approximately 5,625 square feet (0.129 acre). Helicopter landing zones are necessary to facilitate the removal and placement of poles via helicopter. This site is located in the unpaved parking area for the Mt. Gower Preserve and is accessible from Gunn Stage Road. The Mt. Gower HLZ will be utilized for the replacement of new pole(s).

Littlepage Road Helicopter Landing Zone

The Littlepage Road HLZ is approximately 200 feet by 200 feet with a total area of 40,000 square feet (0.92 acre). The site is located northeast of Pole No. P98 and is accessible from the existing access road. Vegetation communities consist of buckwheat scrub, fire-recovering coastal sage scrub, and non-native grassland, which dominate this site.

3.4.9.2 Stringing Sites

Approximately 22 stringing sites will be required and are listed as follows (refer to Appendix 3-B for graphic representation of the proposed stringing sties):

- Stringing Site No. 1 is located adjacent to Creelman Substation. Stringing Site No. 1 is approximately 4,500 square feet (0.1 acre) and will be accessed via Creelman Lane and is located in the unincorporated community of Ramona.
- Stringing Site No. 2 is located adjacent to Pole No. P3. Stringing Site No. 2 is approximately 6,000 square feet (0.14 acre) and will be accessed via Creelman Lane in the unincorporated community of Ramona.
- Stringing Site No. 3 is located adjacent to Pole No. P2. Stringing Site No. 3 is approximately 6,000 square feet (0.14 acre) and will be accessed via Creelman Lane in the unincorporated community of Ramona.

- Stringing Site No. 4 is located adjacent to Pole No. P25. Stringing Site No. 4 is approximately 2,100 square feet (0.05 acre) and will be accessed via existing SDG&E access roads in the unincorporated community of Ramona.
- Stringing Site No. 5 is located adjacent to Pole No. P29. Stringing Site No. 5 is approximately 22,500 square feet (0.52 acre) and will be accessed via existing SDG&E access roads in the unincorporated community of Ramona.
- Stringing Site No. 6 is located adjacent to Pole No. P47. Stringing Site No. 6 is approximately 16,500 square feet (0.38 acre) and will be accessed via existing SDG&E access roads in the unincorporated community of Ramona.
- Stringing Site No. 7 is located adjacent to Pole No. P47. Stringing Site No. 7 is approximately 2,100 square feet (0.05 acre) and will be accessed via existing SDG&E access roads in the unincorporated community of Ramona.
- Stringing Site No. 8 is located adjacent to Pole No. P51. Stringing Site No. 8 is approximately 2,100 square feet (0.05 acre) and will be accessed via existing SDG&E access roads in the unincorporated community of Ramona.
- Stringing Site No. 9 is located adjacent to Pole No. P64. Stringing Site No. 9 is approximately 7,500 square feet (0.17 acre) and will be accessed via existing SDG&E access roads in the unincorporated community of Ramona.
- Stringing Site No. 10 is located adjacent to Pole No. P64. Stringing Site No. 10 is approximately 11,250 square feet (0.26 acre) and will be accessed via existing SDG&E access roads in the unincorporated community of Ramona.
- Stringing Site No. 11 is located adjacent to Pole No. P65. Stringing Site No. 11 is approximately 1,200 square feet (0.03 acre) and will be accessed via existing SDG&E access roads in the unincorporated community of Ramona.
- Stringing Site No. 12 is located adjacent to pole P83. Stringing Site No. 12 is approximately 22,500 square feet (0.52 acre) and will be accessed via existing SDG&E access roads in the unincorporated community of Ramona.
- Stringing Site No. 13 is located adjacent to pole P84. Stringing Site No. 13 is approximately 22,500 square feet (0.52 acre) and will be accessed via existing SDG&E access roads in the unincorporated community of Ramona.
- Stringing Site No. 14 is located adjacent to pole P100. Stringing Site No. 14 is approximately 2,100 square feet (0.05 acre) and will be accessed via existing SDG&E access roads in the unincorporated community of Ramona.
- Stringing Site No. 15 is located adjacent to pole P100. Stringing Site No. 15 is approximately 2,100 square feet (0.05 acre) and will be accessed via existing SDG&E access roads in the unincorporated community of Ramona.
- Stringing Site No. 16 is located adjacent to Pole No. P114. Stringing Site No. 16 is approximately 22,500 square feet (0.52 acre) and will be accessed via West Side Road, a county road located in the unincorporated community of Santa Ysabel.

- Stinging Site No. 17 is located between Pole Nos. P122 and P123. Stringing Site No. 17 is approximately 2,100 square feet (0.05 acre) and will be accessed via existing SDG&E access roads located in the unincorporated community of Santa Ysabel.
- Stringing Site No. 18 is located adjacent to Pole No. P145. Stringing Site No. 18 is approximately 2,100 square feet (0.05 acre) and will be accessed via existing SDG&E access roads located in the unincorporated community of Santa Ysabel.
- Stringing Site No. 19 is located adjacent to Pole No. P146. Stringing Site No. 19 is approximately 11,250 square feet (0.26 acre) and will be accessed via existing SDG&E access roads located in the unincorporated community of Santa Ysabel.
- Stringing Site No. 20 is located adjacent to Pole No. P151. Stringing Site No. 20 is approximately 22,500 square feet (0.52 acres) in size and will be accessed via existing access roads located in the unincorporated community of Santa Ysabel.
- Stringing Site No. 21 is located adjacent to Pole No. P151. Stringing Site No. 21 is approximately 22,500 square feet (0.52 acres) in size and will be accessed via existing access roads located in the unincorporated community of Santa Ysabel.
- Stringing Site 22 is located adjacent to Pole No. P163 inside the Santa Ysabel Substation. Stringing Site No. 22 is approximately 22,500 square feet (0.52 acre) in size and will be accessed via existing access roads located in the unincorporated community of Santa Ysabel.

Additional or other stringing sites may be identified during construction.

3.4.9.3 Pole Sites

Work areas for each type of pole will vary but will be confined to the previously disturbed areas around the bases of the existing poles to the extent possible in order to provide a safe and adequate workspace. The temporary impact area for directly-embedded poles is approximately 304 square feet, and approximately 309 square feet for modified directly-embedded poles.

The positioning of construction equipment (typically line trucks, bucket trucks, and crane trucks) will involve the placement of approximately four outriggers (per vehicle) with dimensions of approximately 2 feet wide by 3 feet long (6 square feet) per outrigger for line trucks, and 4 feet wide by 4 feet long (16 square feet) per outrigger for crane trucks. The locations of the construction vehicles are dependent upon the contractor safely performing the work. The impacts from outriggers staged outside delineated temporary work areas will be evaluated by the onsite biological monitor prior to their placement (as outlined within *SDG&E's Subregional NCCP*). The monitor, as appropriate, will assist crews in outrigger placement to avoid and minimize impacts to sensitive habitat types. In order to maintain a safe working space for crewmembers working directly under all poles anticipated to be replaced, construction vehicles may need to be staged off existing access roads and/or outside delineated temporary work areas when new poles are being placed. These impact areas cannot be accurately anticipated prior to construction, so their impacts will not be identified herein with respect to habitat type; however, the onsite biological monitor will assist crews in locating appropriate staging areas for construction vehicles that avoid and minimize impacts to sensitive habitat types. All final impacts are recorded within the post-construction report prepared pursuant to *SDG&E's Subregional NCCP Implementing Agreement.*

3.4.9.4 Guard Structures

Often, bucket trucks are utilized as guard structures during stringing activities. Where wooden poles are used as guard structures, installation requires the temporary use of approximately 36 square feet of area for a single-pole guard structure and approximately 72 square feet of area for an h-frame guard structure. The temporary work area is located in the immediate vicinity of the guard structure location. No permanent impacts would result from the utilization of guard structures.

3.4.9.5 Temporary Right-of-Way

Construction is anticipated to occur both within and outside of existing ROW. However, no temporary construction easements are anticipated to be required.

3.4.9.6 Access

Construction will primarily take place within the existing SDG&E ROW easements. Most sites/pole locations are accessible by vehicle on unpaved SDG&E-maintained access roads or by overland travel. Other areas without road access will be accessed via footpaths or by helicopter. To enable crews and equipment to access the associated poles, smoothing of the access roads and/or vegetation clearing will be necessary to improve some existing access roads and to re-establish unmaintained access roads pursuant to *SDG&E's Subregional NCCP*. SDG&E is not required to mitigate for impacts to vegetation resulting from road maintenance (i.e., re-establishing) of existing access roads. No new access roads will be established. Cleared vegetation will be removed from the project site and disposed of at an approved offsite facility. Vehicles will remain within existing access roads, previously disturbed areas, and designated temporary work areas, where feasible. At designated drainage crossing locations along the access roads, the blade of the equipment will be lifted 25 feet on either side of the drainage to avoid impacts to the drainage. Temporary bridging of drainage crossings may be utilized wherever feasible.

Approximately seven footpaths are required to access poles that are not accessible by road. These footpaths will be approximately 2 to 4 feet wide. At this time, one footpath will require minor vegetation trimming (refer to Appendix 3-A). Additional footpaths may be required.

3.4.9.7 Underground Distribution and Fiber Optic Lines

Construction of new underground distribution and fiber optic line segments will require room for the safe operation of construction equipment and personnel. The underground line construction included as part of the Proposed Project will utilize the cut and cover construction method, which typically requires 10 to 12 feet of space for construction, but can in some cases be limited to less space depending upon physical constraints. The areas of underground distribution and fiber optic line are described in Appendix 3-A and depicted on Detailed Route Map in Appendix 3-B.

3.4.10 Road Crossings

Typically, guard structures are used for larger road crossings and traffic control is utilized for locations where overhead lines cross smaller roads. Where traffic control is utilized at crossings, encroachment permits are required from the applicable municipal agency. Guard structures are

discussed in Section 3.4.8.4 above. However, special conditions exist for freeway crossings such as where the Proposed Project route crosses Hwy 78, which is under the jurisdictional authority of the California Department of Transportation (Caltrans). SDG&E has previously acquired approval from Caltrans to complete Proposed Project construction activities at this location, however, this approval expired at the end of the 2012 calendar year and SDG&E has requested an extension from Caltrans for this approval (see Section 3.11, Required Approvals).

3.4.11 Helicopter Usage during Power Line Construction

Helicopters may be utilized as a construction tool to set new poles or during stringing of overhead conductor cable associated with the Proposed Project. SDG&E anticipates that light- or medium-duty helicopters (e.g. K-Max and A-star) helicopters will be utilized. Helicopters will only be utilized during daylight hours, and flight paths will be limited to the existing power line ROW except for ingress and egress from the helicopter landing/staging yards. All helicopter utilization will be compliant with all relevant usage permits including Federal Aviation Administration (FAA) and Caltrans.

3.4.12 Site Cleanup

SDG&E will restore all areas that are temporarily disturbed by the Proposed Project activities (including stringing sites, structure removal sites, and staging areas) to approximate pre-construction conditions following the completion of construction. Restoration could include reseeding, planting of replacement vegetation, or replacement of structures (such as fences), as appropriate. In addition, all construction materials and debris will be removed from the Proposed Project area and recycled or properly disposed of off-site. SDG&E will conduct a final survey to ensure that cleanup activities are successfully completed as required.

3.4.13 Retired Structures/Poles, Materials, and Components

It is SDG&E's policy to re-use or recycle all old structures/poles, materials, and components following the retirement of substations, power lines, and structures/poles. Whatever cannot be re-used or recycled is disposed of at an appropriate facility pursuant to all relevant laws. Table 3-1, Common Destination of Retired Project Components, outlines how some major retired project components are often disposed of following construction.

Table 3-1: Common Destination of Retired Project Components

Project Structure, Material, or Component	Common End Use or Destination
Wood power line structures/poles	Donated for re-use or sanitary disposal
Conductor cable	Recycled
Insulators	Sanitary disposal
Scrap steel, copper and other metal	Recycled
Concrete	Recycled
Soils	Re -used onsite or disposed of pursuant to relevant laws
Batteries	Recycled
Source: SDG&E	

3.4.14 Construction Equipment and Personnel

3.4.14.1 Construction Personnel

Construction of the Proposed Project may require multiple four- to six-person crews and associated equipment. Also present throughout construction will be environmental monitors, construction inspectors, and SDG&E personnel. These crews may work simultaneously at various points along the Proposed Project route, with up to approximately 140 people (including construction crews, monitors, and all other support staff) working at one time. SDG&E will supplement its workforce as required during construction from a contractor's pool of experienced personnel.

3.4.14.2 Construction Equipment

Table 3-2, Standard Construction Equipment and Usage lists the typical construction equipment that could be utilized for the Proposed Project and their respective uses with respect to the Proposed Project scope.

Table 3-2: Standard Construction Equipment and Usage

Equipment Type	Equipment Use
2-ton flatbed trucks	Haul materials (including new poles)
Aerial bucket trucks	Access poles, string conductor, modify structure arms, and other various uses
Air compressors	Operate air tools
Backhoe	Excavate trenches
Boom truck	Access poles and other height-restricted items
Bulldozer	Repair access roads
Crane truck	Lift, position structures
Crane	Lift, position structures
Drilling rig/ Truck-mounted augur	Excavate for direct-bury and micropile poles
Dump truck	Haul excavated materials/import backfill, as needed
Flatbed boom truck	Haul and unload materials
Forklift	Transport materials at structure sites and staging yards
Helicopter (light- and medium-duty)	Transport materials, string conductor, and install and remove travelers, set structures
Hydraulic rock-splitting/ rock-drilling equipment	Drill through rock, as needed
Line truck	Install clearance structures
Mobile fueling trucks	Refuel equipment
Mower	Clear vegetation

Table 3-2 (cont): Standard Construction Equipment and Usage

Equipment Type	Equipment Use
Pickup trucks	Transport construction personnel
Portable generators	Operate power tools
Pulling rig	Pull conductor
Tool van	Tool storage
Tractor/Trailer Unit	Transport materials at structure sites and staging yards
Water truck	Dust control
Wire truck	Hold spools of wire
Source: SDG&E	

3.5 CONSTRUCTION SCHEDULE

SDG&E estimates that construction of the Proposed Project will take a total of approximately 9 months to complete, depending on outages. Construction is scheduled to begin in January 2014 and run through September 2014. The complete construction schedule, outlined by task, is summarized in Table 3-3, Proposed Construction Schedule, below.

Table 3-3: Proposed Construction Schedule

Proposed Project Segment/Task	Approximate Duration (Months)	Anticipated Start Date[1]
Micropile foundation drilling and grouting	3	January 2014
Cap and testing	0.5	March 2014
Directly-embedded pole – hole excavation	4	January 2014
Temporary pole installation	0.5	January 2014
Power line construction (poles)	3	March 2014
Pulling and tensioning	2.5	May 2014
Sag work (overhead conductor)	2	June 2014
Underground distribution lines	2.5	March 2014
Demobilization	0.5	August 2014
Clean-up	1	August 2014
Notes: [1]Pending acquisition of all required approvals. Source: SDG&E		

3.6 PERMANENT LAND AND RIGHT-OF-WAY REQUIREMENTS

Table 3-4, Permanent Land and ROW Requirements, outlines the anticipated new land and ROW required for the Proposed Project.

Table 3-4: Permanent Land and ROW Requirements

Proposed Project Component	Approximate Area (feet)	Approximate Area (acres)
TL 637 Wood-to-Steel	None	None
Creelman and Santa Ysabel Substations	None	None
Distribution Lines	None	None
Fiber Optic Line	None	None
Source: SDG&E		

3.7 OPERATION AND MAINTENANCE (EXISTING AND PROPOSED)

The Proposed Project will replace existing electric power line and distribution facilities within an existing utility corridor. SDG&E currently operates and maintains these facilities consistent with the ordinary operating restrictions described in Section 3.8. These ordinary restrictions include standard protocols and procedures, such as *SDG&E's Subregional NCCP*, which is described in greater detail in Section 4.4, Biological Resources, as well as other ordinary operating restrictions that have been developed to avoid and minimize environmental impacts and to comply with applicable environmental laws and regulations. No change in SDG&E's operations and maintenance practices and restrictions is anticipated or included as part of the Proposed Project. As noted in Section 3.8, the existing operating practices and restrictions have been incorporated into the design of the Proposed Project and are also reflected in the baseline from which impacts of the Proposed Project have been evaluated.

SDG&E will continue to regularly inspect, maintain, and repair the reconstructed power line and distribution facilities and substations following completion of Proposed Project construction. Operations and maintenance activities would not increase in intensity, frequency or duration with implementation of the Proposed Project and would be substantially similar to existing operations and maintenance activities. Typical activities involve both routine inspections and preventive maintenance to ensure service reliability, as well as emergency work to maintain or restore service continuity. SDG&E performs aerial and ground inspections of Proposed Project facilities and patrols aboveground components annually. Inspection for corrosion, equipment misalignment, loose fittings, and other common mechanical problems is performed at least every three years (per G.O. 165) for power lines.

SDG&E uses helicopters in the visual inspection of overhead facilities. SDG&E patrols each electric power line annually or as required via helicopter. SDG&E may also use helicopters to deliver equipment, position poles and structures, string lines, and position aerial markers, as required by FAA regulations. SDG&E's Transmission[3] department uses helicopters for patrolling power lines during trouble jobs (e.g., outages/service curtailments) in areas that have no vehicle access or rough terrain. For patrolling during such jobs, the helicopter picks up the

[3] The term "Transmission" as used within this section of the PEA refers to internal SDG&E operating departments and is not intended to suggest that TL 637 is designed for immediate or eventual operation at 200kV or above.

patrolman at the district yard. For new construction or maintenance, the helicopter needs a flat staging area for fueling and picking up material, equipment, and personnel. The area required for small helicopter staging is generally 100 feet by 100 feet. The size of the crew needed varies from four to 10 crewmembers, two helicopter staff, and a water truck driver to apply water for dust control at the staging area. Most helicopter operations take only one day.

SDG&E maintains a clear working space area around certain poles pursuant to requirements found within G.O. 95 and Public Resources Code (PRC) 42.92. SDG&E keeps these areas clear of shrubs and other obstructions for fire prevention purposes. In addition, vegetation that has a mature height of 15 feet or taller are not allowed to grow within 10 horizontal feet of any conductor within the ROW for safety and reliability reasons.

Typical power line operation and maintenance activities include security and other inspections, ROW and access repairs, pole brushing in accordance with fire break clearance requirements, herbicide application, emergency and non-emergency repairs and replacements, insulator washing, and tree trimming. These activities are performed on an as needed basis.

As to substation operations and maintenance, both the Creelman and Santa Ysabel Substations will continue to be operated and maintained consistent with current substation operations. In general, routine substation operations will be the same as what occurs at the existing substations. Maintenance activities will include equipment testing, equipment monitoring and repair, and emergency and routine procedures for service continuity and preventive maintenance. Typically, a major maintenance inspection will take place annually for approximately one week.

Routine vegetation clearing would continue to occur at each substation on an as-needed basis for purposes of safety, access, and aesthetics. Vegetation clearing activities would typically involve the presence of one to two small maintenance vehicles and one or more employees to clear or trim vegetation to achieve the minimum working space around the substation facilities.

3.8 PROJECT DESIGN FEATURES AND ORDINARY CONSTRUCTION/OPERATING RESTRICTIONS

The Proposed Project includes design features and ordinary construction and operating restrictions that avoid and minimize environmental impacts. The design features and ordinary construction and operating restrictions incorporated into the Proposed Project include measures that are routinely implemented by SDG&E on other projects that involve ground disturbance. Many of these features and restrictions have been developed over time to avoid and minimize environmental impacts, to comply with *SDG&E's Subregional NCCP*, and to comply with applicable environmental laws and regulations. Consistent with its existing operations and maintenance practices, SDG&E will implement these operating restrictions as appropriate during construction, operation, and maintenance to avoid and minimize potential environmental impacts.

Many of the design features and ordinary construction and operating restrictions incorporated into all phases of the Proposed Project are described below.

- **Project plans and specifications take into account the potential for mass wasting and liquefaction.** A geotechnical study was conducted by VO Engineering Inc. in 2011 to evaluate the pole locations along the Proposed Project power line route for the presence of geologic hazards. The geotechnical study indicated the presence of geologic conditions potentially susceptible to mass wasting or liquefaction at the locations of proposed Pole Nos. P103, R107, P110, P114, P129, P22, P23, P48, P49 and P51. The final project plans and specifications prepared by the responsible engineer have taken into account the geologic hazard conditions present at these locations and include appropriate engineering design and construction measures to minimize the potential for damage to Proposed Project structures in the event that there is an occurrence of these hazards.

- **Steel structures.** New structures are designed utilizing steel to avoid potential adverse effects relating to fire and fire damage.

- **TL 637 Project Fire Plan.** The purpose of the Proposed Project is to improve the reliability of the power lines in fire-prone (very high to extreme fire threat areas) and wind-prone areas and minimize the risks associated with future wildfires. The Proposed Project is located within the Very High fire threat designation, as indicated on SDG&E's 2012 Fire Threat Zone Map. The Proposed Project design includes fire hardening techniques, including replacing wood poles with steel poles, increasing conductor spacing to maximize line clearances, installing steel poles designed to withstand an extreme wind loading case and known local conditions, and installing longer polymer insulators. These design components of the Proposed Project minimize fire risk through enhanced safety and reliability of the power line system during extreme weather conditions. In addition to these design features, the Proposed Project will implement the *TL 637 Project Fire Plan*. The *TL 637 Project Fire Plan* exceeds fire prevention measures as stated in California Forestry Practice Rules; PRC 4:6. Avoidance and minimization measures to prevent wildland fires include training, oversight, and work controls in all phases of preparation and implementation of the Proposed Project. Training and briefings in fire prevention and suppression methods are key components of reducing the threat of a wildland fire on the Proposed Project. Additionally, suppression in the event of a fire starting will be facilitated by locating water tanks within two minutes of a work site, requiring firefighting equipment within 50 feet of any work/equipment site, and avoidance of construction activities during periods of declared Red Flag Warnings or other severe fire weather conditions as identified by SDG&E. Other avoidance and minimization measures may be employed, such as stand-by firefighters and fire engines. In addition, portions of the Proposed Project occurring within the Cleveland National Forest must abide by the *Cleveland National Forest Fire Plan.* The plan describes the project activity level (PAL) work restriction measures to employ while working on forest lands. Therefore, the Proposed Project design and construction avoidance and minimization measures will avoid and minimize fire risks as outlined in the *TL 637 Project Fire Plan* and the *Cleveland National Forest Fire Plan*.

- **Construction scheduling.** SDG&E will coordinate construction of the Proposed Project such that construction activities will typically not overlap with other SDG&E construction projects in the immediate vicinity of the Proposed Project.

- **SDG&E Subregional NCCP.** The Proposed Project will avoid and minimize impacts to biological resources through implementation of the *SDG&E Subregional NCCP*. The *SDG&E Subregional NCCP* establishes a mechanism for addressing biological resource

impacts incidental to the development, maintenance, and repair of SDG&E facilities within the *SDG&E Subregional NCCP* coverage area. The Proposed Project is located within the *SDG&E Subregional NCCP* coverage area.

The *SDG&E Subregional NCCP* includes a Federal Endangered Species Act (ESA) Section 10(A) permit and a California ESA Section 2081 memorandum of understanding (for incidental take) with an Implementation Agreement with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW – formerly the California Department of Fish and Game), respectively, for the management and conservation of multiple species and their associated habitats, as established according to the Federal and State ESAs and California's NCCP Act. The NCCP's Implementing Agreement confirms that the mitigation, compensation, and enhancement obligations contained in the Agreement and the *SDG&E Subregional NCCP* meet all relevant standards and requirements of the California ESA, the Federal ESA, the NCCP Act, and the Native Plant Protection Act with regard to SDG&E's activities in the Subregional Plan Area.

Pursuant to the *SDG&E Subregional NCCP*, SDG&E conducted pre-construction studies for all activities occurring off of existing access roads in natural areas. An independent biological consulting firm surveyed all Proposed Project impact areas and prepared a Pre-activity Study Report (PSR) outlining all anticipated impacts related to the Proposed Project. The Proposed Project will include monitoring for all project components, as recommended by the PSR and outlined in the *SDG&E Subregional NCCP*, as well as other avoidance and minimization measures outlined in the NCCP's Operational Protocols. The PSR was submitted to the CDFW and USFWS, and no comments were received. Prior to the commencement of construction, a verification survey will be conducted of the Proposed Project disturbance areas, as required by the *SDG&E Subregional NCCP*.

Biological monitors will be present during construction to assure implementation of the avoidance and minimization measures. If the previously-delineated work areas must be expanded or modified during construction, the monitors will survey the additional impact area to determine if any sensitive resources will be impacted by the proposed activities, to identify avoidance and minimization measures, and to document any additional impacts. Any additional impacts are included in a Post-Construction Report (PCR) for purposes of calculating the appropriate mitigation, which generally includes site enhancement or credit withdrawal from the SDG&E mitigation bank. When construction is complete, the biological monitor will conduct a survey of the entire line to determine actual impacts from construction. The PCR will determine how much site enhancement and credit withdrawal from the SDG&E mitigation bank will be required to address impacts from project related activities. These impact and mitigation credit calculations are submitted to the USFWS and the CDFW as part of the NCCP Annual Report pursuant to requirements of the NCCP and the NCCP Implementing Agreement.

Specific operating restrictions that are incorporated into the Proposed Project design to comply with the *SDG&E Subregional NCCP* include the following:

- Vehicles would be kept on access roads and limited to 15 miles per hour (Section 7.1.1, 1.).
- No wildlife, including rattlesnakes, may be harmed, except to protect life and limb (7.1.1, 2.).
- Feeding of wildlife is not allowed (Section 7.1.1, 4.).
- No pets are allowed within the ROW (Section 7.1.1, 5.).).
- Plant or wildlife species may not be collected for pets or any other reason. (Section 7.1.1, 7).
- Littering is not allowed, and no food or waste would be left on the ROW or adjacent properties (Section 7.1.1, 8.).
- Measures to prevent or minimize wild fires would be implemented, including exercising care when driving and not parking vehicles where catalytic converters can ignite dry vegetation (Section 7.1.1, 9.).
- Field crews shall refer all environmental issues, including wildlife relocation, dead, or sick wildlife, or questions regarding environmental impacts to the Environmental Surveyor. Biologists or experts in wildlife handling may be necessary to assist with wildlife relocations (Section 7.1.1, 10.).
- All SDG&E personnel would participate in an environmental training program conducted by SDG&E, with annual updates (Section 7.1.2, 11.).
- The Environmental Surveyor shall conduct preactivity studies for all activities occurring in natural areas, and will complete a preactivity study form including recommendations for review by a biologist and construction monitoring, if appropriate. The form will be provided to CDFW and USFWS but does not require their approval (Section 7.1.3, 13.).
- The Environmental Surveyor shall flag boundaries of habitats to be avoided and, if necessary, the construction work boundaries (Section 7.1.3, 14.).
- The Environmental Surveyor must approve of activity prior to working in sensitive areas where disturbance to habitat may be unavoidable (Section 7.1.4, 25.).).
- In the event SDG&E identifies a covered species (listed as threatened or endangered by the federal or state) of plant within the temporary work area (10 foot radius) surrounding a power pole, SDG&E would notify the USFWS (for Federal ESA listed plants) and CDFW (for California ESA listed plants) (Section 7.1.4, 28.).
- The Environmental Surveyor shall conduct monitoring as recommended in the preactivity study form (Section 7.1.4, 35.).
- Supplies, equipment, or construction excavations where wildlife could hide (e.g., pipes, culverts, pole holes, trenches) shall be inspected prior to moving or working on/in them (Section 7.1.4, 37, and 38.).

- Fugitive dust will be controlled by regular watering and speed limits (Section 7.1.4, 39.).
- During the nesting season, the presence or absence of nesting species (including raptors) shall be determined by a biologist who would recommend appropriate avoidance and minimization measures (Section 7.1.6, 50).
- Maintenance or construction vehicle access through shallow creeks or streams is allowed. However no filling for access purposes in waterways is allowed (Section 7.1.7, 52).
- Staging/storage areas for equipment and materials shall be located outside of riparian areas (Section 7.1.7, 53.).

- **Cultural Resources.** SDG&E's practices are in accordance with Federal, State and local laws to protect and avoid cultural resources, including: Archaeological Resources Protection Act of 1979, as amended, National Historic Preservation Act of 1966, as amended (NHPA), California Penal Code 622 ½, PRC 5097.1 through 5097.6, PRC 5097.98, and CEQA. An independent Cultural Resource Management firm conducted pre-construction surveys under contract with SDG&E, prepared an inventory of cultural resources within the Proposed Project's Area of Potential Effect, and provided recommendations for avoidance and minimization to assist SDG&E in its compliance with CEQA requirements. SDG&E's Principal Cultural Resources Specialist worked closely with SDG&E design and engineering to move several of the poles during the design phase of the Proposed Project to avoid impacts to known cultural resources. Known cultural resources will be spanned or otherwise avoided through Project design and through routing during construction activities to the extent feasible. In addition, the micropile pole type will be used at many locations during construction to minimize ground disturbance, and decrease potential impacts to unknown buried deposits.

  - **Cultural resources sensitivity training.** Prior to construction or ground-disturbing activities, all SDG&E, contractor, and subcontractor Project personnel will receive training regarding the appropriate work practices necessary to effectively implement the project design features and ordinary construction restrictions relating to cultural resources, including the potential for exposing subsurface cultural resources and paleontological resources. This training will include presentation of the procedures to be followed upon the discovery or suspected discovery of archaeological materials, including Native American remains, as well as of paleontological resources. Known archaeological sites would be demarcated by a qualified archaeologist as Environmentally Sensitive Areas prior to the start of construction. Construction crews would be instructed to avoid disturbance of these areas.
  - **Archaeological monitoring.** A qualified archaeologist will attend preconstruction meetings, as needed, and a qualified archaeological monitor will monitor activities in the vicinity of all known cultural resources within the Proposed Project area. The requirements for archaeological monitoring will be noted on the construction plans. The archaeologist's duties will include monitoring, evaluation of any finds, analysis of materials, and preparation of a monitoring results report conforming to Archaeological Resource Management Reports guidelines.

- **Unanticipated discovery of cultural resources.** In the event that cultural resources are discovered, the archaeologist would have the authority to divert or temporarily halt ground disturbance to allow evaluation of potentially significant cultural resources. The archaeologist would contact SDG&E's Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The archaeologist, in consultation with SDG&E's Cultural Resource Specialist, would determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager would have to concur with the evaluation procedures to be performed before construction activities would be allowed to resume. For significant cultural resources, preservation in place would be the preferred manner of mitigating impacts. For resources that could not be preserved in place, a Research Design and Data Recovery Program would be prepared and carried out to mitigate impacts. Cultural resources curation would be implemented if resources cannot be preserved in place, and are considered to be unique and important. All collected cultural remains would be cataloged, and permanently curated with an appropriate institution. All artifacts would be analyzed to identify function and chronology as they relate to the history of the area. Faunal material would be identified as to species.
- **Unanticipated discovery of human remains.** If human remains are encountered during construction, SDG&E will comply with California State law (Health and Safety Code Section 7050.5; PRC Sections 5097.94, 5097.98 and 5097.99). This law specifies that work will stop immediately in any areas where human remains or suspected human remains are encountered. The appropriate agency and SDG&E will be notified of any such discovery. SDG&E will contact the Office of the Medical Examiner. The Medical Examiner has two working days to examine the remains after being notified by SDG&E. Under some circumstances a determination may be made without direct input from the Medical Examiner. When the remains are determined to be Native American, the Medical Examiner has 24 hours to notify the Native American Heritage Commission (NAHC).

  The NAHC will immediately notify the identified most likely descendant (MLD) and the MLD has 24 hours to make recommendations to the landowner or representative for the respectful treatment or disposition of the remains and grave goods. If the MLD does not make recommendations within 24 hours, the area of the property must be secured from further disturbance. If there are disputes between the landowner and the nearest likely descendants, the NAHC will mediate the dispute to attempt to find a resolution. If mediation fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall re-inter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.
- **Paleontological monitoring.** A paleontological monitor will work under the direction of a qualified Project paleontologist and will be on site to observe excavation operations that involve the original cutting of previously undisturbed deposits for the eight poles located within paleontologically sensitive formations (i.e., Pomerado Conglomerate, Late Pleistocene to Holocene-age channel

deposits). A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials.

- **Unanticipated discovery of fossils.** In the event that fossils are encountered, the paleontological monitor would have the authority to divert or temporarily halt construction activities in the area of discovery to allow recovery of fossil remains in a timely fashion. The paleontologist would contact SDG&E's Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The paleontologist, in consultation with SDG&E's Cultural Resource Specialist would determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager would have to concur with the evaluation procedures to be performed before construction activities would be allowed to resume. Because of the potential for recovery of small fossil remains, it may be necessary to set up a screen-washing operation on site. If fossils are discovered, the paleontologist (or paleontological monitor) would recover them along with pertinent stratigraphic data. In most cases, this fossil salvage can be completed in a short period of time. Because of the potential for recovery of small fossil remains, such as isolated mammal teeth, recovery of bulk-sedimentary-matrix samples for off-site wet screening from specific strata may be necessary, as determined in the field. Fossil remains collected during monitoring and salvage would be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections, and a paleontological monitoring report would be written.

- **SDG&E Water Quality Construction BMP Manual.** SDG&E's *Water Quality Construction BMPs Manual* (*BMP Manual*) was cre**a**ted to organize SDG&E's standard water quality protection procedures for various specific actions that routinely occur as part of SDG&E's ongoing construction, operations, and maintenance activities. The primary focus of most BMPs is the reduction and/or elimination water quality impacts during construction of linear projects such as the Proposed Project. The BMPs described within the *BMP Manual* were derived from several sources including the State of California guidelines as well as the Caltrans Water Quality BMPs. The *BMP Manual* will be utilized during construction (by way of preparation and implementation of the SWPPP), operation, and maintenance of the Proposed Project to ensure compliance with all relevant SDG&E and government-mandated water quality standards.

- **Electric Standard Practice 113.1 – Wildland Fire Prevention and Fire Safety.** The Proposed Project will be constructed consistent with *Electric Standard Practice 113.1 – Wildland Fire Prevention and Fire Safety*. *Electric Standard Practice 113.1* outlines practices and procedures for SDG&E activities occurring within areas of potential wildland fire threat within SDG&E's service territory. The Proposed Project design includes replacement of wood poles with steel poles, increased conductor spacing to maximize line clearances, installation of steel poles to withstand an extreme wind loading case and known local conditions, and undergrounding of a portion of the power line. These design components of the Proposed Project minimize the fire risk through enhanced safety and reliability of the power line system, particularly during extreme weather conditions. The standard practices in *Electrical Standard Practice 113.1* include avoidance and minimization measures to comply with state and local fire ordinances.

- **Visual screening of staging yards.** The Warnock and Santa Ysabel Staging Yards will have opaque mesh installed along the fence that will soften the view of the staging yard from public vantage points such as roads, residences, and public vantage points.
- **Restoring appearance of temporarily disturbed areas.** When Proposed Project construction has been completed, all temporarily disturbed terrain will be restored, as needed and as appropriate, to approximate preconstruction conditions. Re-vegetation would be used, where appropriate (re-vegetation in certain areas is not possible due to vegetation management requirements related to fire safety) to re-establish a natural appearing landscape and reduce potential visual contrast between disturbed areas and the surrounding landscape.
- **Soil stabilization.** Once temporary surface disturbances are complete, areas that would not be subject to additional disturbance will be stabilized to control soil erosion.
- **Generators.** Generator use will be limited to less than 50 horsepower (HP) at all staging yards. Any generators used at the staging yards will be located away from noise sensitive areas, and positioned on the property to comply with the San Diego County noise ordinance.
- **Mufflers.** Functioning mufflers will be maintained on all equipment.
- **Helicopter use.** Helicopter takeoffs and landings conducted at the Warnock and Santa Ysabel Staging Yards will be restricted to the approximate center of the staging area. Helicopter usage will conform to acceptable hours for construction activities, as outlined within the San Diego County Noise Code.
- **Resident notification.** Residents within 50 feet will receive notification of the start of construction at least one week prior to the start of construction activities within that area.
- **Construction noise.** SDG&E will meet and confer with the County, as needed, to discuss any anticipated deviations from the requirements of the County Noise Code. If requested by the County, SDG&E will evaluate potential additional steps to reduce noise impacts, including re-location of residents and/or the use of portable noise barriers.
- **Blasting.** In the unlikely event that rock blasting is used during construction, a noise and vibration calculation will be prepared and submitted to SDG&E Environmental Programs and Transmission Engineering and Design for review before blasting at each site. The construction contractor will ensure compliance with all relevant local, state, and federal regulations relating to blasting activities, as well as SDG&E's blasting guidelines.
- **Coordination and measures within parks and preserves**. Appropriate safety measures will be implemented where trails and construction areas are near each other within the Simon Preserve, Mt. Gower Preserve, and the Mt. Gower HLZ to provide a safety buffer between recreational users and construction areas. Construction schedule and activities will be coordinated with the authorized officer for the recreation area.
- **Temporary trail detours.** Where feasible, temporary detours will be provided for trail users. Signs will be provided to direct trail users to the temporary trail detours.
- **Standard Traffic Control Procedures.** SDG&E will implement a traffic control plan to address potential disruption of traffic circulation during construction activities and

address any safety issues. The traffic control plan will be prepared by the project engineer or contractor and subject to approval by the County.

- **Encroachment permits.** SDG&E will obtain the required encroachment permits from Caltrans for work near Hwys 78 and 79, and will ensure that proper safety measures are in place while construction work is occurring near public roadways. These safety measures include flagging, proper signage, and orange cones to alert the public to construction activities near the roadway.

3.9 APPLICANT PROPOSED MEASURES

Applicant Proposed Measures (APMs) are measures that have been identified and developed specifically for a given project during the preparation of the PEA. APMs are typically applied to project-related activities to avoid potential project-specific impacts, or ensure that potential project-specific impacts remain less than significant where they cannot be avoided. With implementation of project design features and SDG&E's ordinary construction and operating restrictions, no APMs are required; therefore none are proposed as part of the Proposed Project.

3.10 ELECTRIC AND MAGNETIC FIELDS

A specific report concerning electric and magnetic fields for the Proposed Project can be found in Appendix 3-D, Detailed Magnetic Field Management Plan.

3.11 REQUIRED APPROVALS

The CPUC is the lead California agency for the Proposed Project. SDG&E must comply with the CPUC's G.O. No. 131-D, which contains the permitting requirements for the construction of the Proposed Project. This PEA is being prepared as part of an application to obtain a PTC for the Proposed Project.

In addition to the PTC, SDG&E has obtained (or will obtain) approval for the Proposed Project from other Federal, State, and local agencies. Table 3-5, Anticipated Permit, Approval, and Consultation Requirements identifies these other permits, approvals, and licenses that SDG&E has obtained for the Proposed Project. Some of these required approvals are further detailed in the following subsections.

3.11.1 Cleveland National Forest

An approximately 2,000 foot segment of TL 637 crosses a corner of the Cleveland National Forest. This segment includes two poles (Pole Nos. P115 and P116) that do not need to be replaced as part of the Proposed Project. Both of these poles were previously replaced through the Corrective Maintenance Program. The two Cleveland National Forest pole replacements were approved by the Cleveland National Forest (both Descanso and Palomar Districts) on August 30, 2011 and the poles were replaced. Replacement of these poles was completed on February 27, 2012.

3.11.2 U.S. Bureau of Land Management and County of San Diego

TL 637 crosses the Mount Gower and Simon Preserves. The Mt. Gower Preserve is owned by BLM and managed by the County of San Diego. The Simon Preserve is owned and managed by

the County of San Diego. The Proposed Project triggered an amendment to the BLM ROW grant, which was recently renewed in August 2011 and amended in May 2012. SDG&E's easement crossing the Simon Preserve, acquired in 1959, pre-dates ownership of this area by the County of San Diego.

To obtain BLM approval, SDG&E filed an SF-299 application with all applicable exhibits and environmental and cultural reviews. BLM issued the ROW amendment on June 1, 2012 pursuant to a categorical exclusion from the National Environmental Policy Act (NEPA).

No further action was needed for the 1959 easement through the Simon Preserve. An on-site coordination meeting was conducted on April 25, 2012 by SDG&E staff with attendance from BLM and County of San Diego staff to demonstrate how SDG&E would conduct work for the Proposed Project while continuing to allow public access to the County preserves and trails.

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Table 3-5: Anticipated Permit, Approval, and Consultation Requirements

Permit/Approval/Consultation	Agency	Jurisdiction/Purpose	Permit Status
Federal Agencies			
NEPA Compliance, ROW Grant amendment	BLM	Construction on BLM managed lands.	Approval obtained
Clean Water Act Section 404	United States Army Corps of Engineers	Impacts to waters of the U.S.	Coverage under non-notifying Nationwide Permit No. 12.
State Agencies			
PTC	CPUC	Overall project approval and CEQA review	PEA submitted as part of PTC application
NPDES–General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities	State Water Resources Control Board	Stormwater discharges associated with construction activities disturbing more than one acre of land	Not yet applied for
Section 401 Water Quality Certification	Regional Water Quality Control Board	Impacts to waters of the U.S.	Permit obtained
Encroachment Permit	Caltrans	Construction, operation, and maintenance within, under, or over state highway ROW	Approval expired, an extension has been requested.
Local Agencies			
Traffic Control Plan(s)	San Diego County	Construction within, under, or over county roadways	Not yet applied for

3.12 REFERENCES

San Diego Gas & Electric Company. December 15, 1995. *Subregional Natural Community Conservation Plan*.

San Diego Gas & Electric Company. July, 2009. *Electric Standard Practice No. 113.1 – Wildland Fire Prevention and Fire Safety*.

San Diego Gas & Electric Company. December 2012. *Fire Prevention Plan*.

San Diego Gas & Electric Company. January 2013. *TL 637 Project Fire Plan*.