

1. Introduction

1.1 Project Overview

San Diego Gas & Electric (SDG&E) proposes to construct and operate the Vine 69/12-kV Substation Project (“Project”). A Final Mitigated Negative Declaration (MND) and supporting Initial Study (IS/MND) were prepared to assess the Project’s potential environmental effects. The Initial Study was prepared based on information in the Proponent’s Environmental Assessment (PEA), project site visits, and supplemental research. The Final MND was released in January 2016.

The Project is located within the southwestern portion of the City of San Diego, California near the San Diego International Airport. The Project includes four major components: (1) Construction of the proposed Vine Substation, located at 3548 Kettner Boulevard at the corner of Vine Street and Kettner Boulevard; (2) relocation of several 12-kV distribution circuits within City of San Diego public streets; (3) loop-in of an existing 69-kV power line to the new substation, and (4) upgrade of an existing telecommunication system.

A detailed project description, including figures, is provided in Attachment A.

1.2 Authority

The California Public Utilities Commission (CPUC) has broad regulatory authority under Article XII of the California Constitution, and Section 702 of the Public Utilities Code (PU Code) mandates that every public utility obey and comply with every order, decision, direction or rule made by the Commission. Public utilities are subject to enforcement action and fines pursuant to PU Code Sections 2102-2105, 2107, 2108, and 2114. In 2013, the CPUC established a CEQA Citation Program authorizing Staff to fine public utilities for non-compliance with Permits to Construct (PTCs) and Certificates of Public Convenience and Necessity (CPCNs). MMCRPs are adopted as part of PTCs and CPCNs and are enforced as such.

Monitoring of mitigation measures to be implemented by a project is required by the California Environmental Quality Act (CEQA). CEQA Guidelines Section 15097 clarifies requirements for mitigation monitoring or reporting. As well, Section 21081.6 of the California Public Resources Code (PRC) requires a public agency to adopt a mitigation monitoring and reporting program when it approves a project that is subject to preparation of an Environmental Impact Report (EIR) or Mitigated Negative Declaration (MND) and where significant adverse environmental effects have been identified.

Mitigation measures to be implemented as part of the Project were identified in the Final MND prepared by CPUC for the Project. The MND was adopted by the California Public Utilities Commission (CPUC) on May 12, 2016 in Decision D.16-05-008 and includes procedures for preparing and implementing a Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) to ensure compliance with the mitigation measures approved in the MND. In addition, Applicant Proposed Measures (APMs) were adopted as part of the MND. Together, the mitigation measures and APMs identified in the MND provide the framework for this MMCRP.



1.3 Mitigation Monitoring, Compliance, and Reporting Plan

Within SDG&E's application, the utility proposed APMs to reduce potentially significant adverse impacts related to project construction and operation. In addition, mitigation measures are imposed on the Project by the CPUC and regulatory agencies may impose permit requirements.

The MMCRP provides guidelines and procedures for environmental compliance on the Project. The MMCRP was developed by CPUC in coordination with SDG&E and CPUC's Environmental Monitors (CPUC EMs). The MMCRP defines reporting relationships, provides information regarding the roles and responsibilities of the Project's environmental compliance personnel, sets out compliance reporting procedures, and establishes a communication protocol. The communication information listed in the MMCRP will be updated throughout construction.

The purpose of this MMCRP is to ensure effective implementation of the mitigation measures and APMs identified in the MND and imposed by the CPUC as part of project approval. It describes the logistics of the monitoring process and establishes protocols to be followed by CPUC's third-party Environmental Monitors and SDG&E project staff. This MMCRP includes:

- Procedures for approving minor project changes;
- Procedures for dispute resolution;
- APMs and mitigation measures that SDG&E must implement as part of the Project;
- Actions required to implement these measures;
- Monitoring requirements; and
- Timing of implementation for each measure.

Section 6 lists the APMs and mitigation measures, the timing for completion, and whether CPUC review or approval is required before construction can commence.

A draft version of the MMCRP was distributed to SDG&E and CPUC EMs for review and comment. The final language of the MMCRP was established in consultation with SDG&E.

1.4 Agencies with Jurisdiction

The CPUC is the Lead Agency for the Project. However, the project route affects resources or requires activities that are under the jurisdiction of or regulated by other agencies. These agencies that may require separate permits or approvals are listed in Table 1. Contact information for individual agencies is provided in Table 2.

All required permits are to be secured by SDG&E and their terms and conditions implemented prior to undertaking any work that requires such permits. CPUC's EM will be provided copies of every permit secured and will include permit compliance as part of general environmental monitoring duties. If the CPUC EM observes activities or conditions believed to be in violation of a permit, the CPUC EM has the authority to communicate these observations to the appropriate agency. Under their own authority and at their discretion, permitting agencies may implement their own monitoring and reporting schemes and undertake whatever enforcement actions they are authorized to pursue.

Important: The status of required permits will be included in any request by SDG&E for a Notice to Proceed from the CPUC. Copies of permits, including any permit requirements and stipulations, shall be provided to CPUC.

Table 1. Permits that May Be Required for the Vine 69/12-kV Substation Project

| Agency | Permit, Approval, or Consultation | Jurisdiction/Purpose |
|---|---|--|
| FEDERAL/STATE AGENCIES | | |
| U.S. Fish and Wildlife Service (USFWS), Sacramento Field Office | Implementation of SDG&E's NCCP | Activities within NCCP coverage areas that impact biological resources (required only for review of the Proposed Project, and no approval or permit is involved) |
| California Department of Fish and Wildlife (CDFW) | Implementation of SDG&E's NCCP | Activities within NCCP coverage areas that impact biological resources (required only for review of the Proposed Project, and no approval or permit is involved) |
| State Water Resources Control Board (SWRCB) | National Pollutant Discharge Elimination System General Construction Permit | Storm water discharges associated with construction activities disturbing more than one acre of land |
| LOCAL/REGIONAL AGENCIES | | |
| North County Transit District (NCTD) | Right-of-Entry Permit | Access to NCTD Property during construction |
| Metropolitan Transit System (MTS) | Right-of-Entry Permit | Access to MTS property during construction |
| Metropolitan Transit System (MTS) | License Agreement | Operation and maintenance within, under, or over a railroad ROW |
| City of San Diego | Encroachment Permit | Construction, operation and maintenance within, under, or over city or county road ROW |
| City of San Diego | Grading Permit | On-site grading activities |
| City of San Diego | Noise Abatement and Control Administrator Permit | For work occurring after 7:00 p.m. |
| City of San Diego | Traffic Management Plan | SDG&E will submit the plan to the City of San Diego prior to construction and will abide by the requirements set forth in the permit as it pertains to ingress and egress routes |

Table 2. Jurisdictional Agencies Associated with the SDG&E Vine 69/12-kV Substation Project

| Agency | Address | Contact Person | Phone | E-mail Address |
|---|--|------------------|--------------------------|----------------------------------|
| LEAD AGENCY | | | | |
| California Public Utilities Commission | 505 Van Ness Avenue San Francisco, CA 94102 | Eric Chiang | 415-703-1956 | eric.chiang@cpuc.ca.gov |
| FEDERAL AGENCIES | | | | |
| US Fish and Wildlife Service | 6010 Hidden Valley Road, Suite 101 Carlsbad, CA 92011 | Patrick Gower | 760-431-9440 | patrick_gower@fws.gov |
| STATE AGENCIES | | | | |
| California Department of Fish and Wildlife | 3883 Ruffin Road San Diego, CA 92123 | Elyse Levy | 858-467-4237 | elyse.levy@wildlife.ca.gov |
| State Water Resources Control Board (SWRCB) | San Diego Regional Water Board (Region 9) 2375 Northside Drive, Suite 100 San Diego, CA 92108-2700 | To Be Determined | 619-516-1990 | rb9_questions@waterboards.ca.gov |
| LOCAL AND REGIONAL | | | | |
| North County Transit District (NCTD) | 205 South Tremont Street Oceanside, CA 92054 | Monica Coria | 760-967-2851 | mcoria@nctd.org |
| Metropolitan Transit System (MTS) | 1255 Imperial Avenue, #100 San Diego, CA 92101 | David Berryman | 619-795-0325 ext. 216 | david.berryman@railpros.com |
| City of San Diego | 1222 First Avenue San Diego, CA 92101 | Tony Khalil | 619-236-5526 | TSKhalil@sandiego.gov |

1.5 Schedule

SDG&E expects to energize the new substation by July 1, 2017. Table 3 shows a preliminary construction schedule for key aspects of the Project: (1) Construction of the proposed Vine Substation, (2) relocation of several 12-kV distribution circuits, (3) loop-in of an existing 69-kV power line, (4) and upgrade of existing telecommunication system. The schedule is based on initial conceptual engineering. The actual construction schedule may vary based upon many factors, including the timeline for additional agency approvals, materials acquisition, environmental conditions, and any necessary changes to project design due to unexpected physical conditions.

Important: Except for such pre-construction activities as engineering, design, studies, and permitting, Project-related construction activities will not begin without a Notice to Proceed (NTP) from the CPUC. A request for a Notice to Proceed (NTP) must be made by SDG&E and approved by CPUC (see Section 4.1.1). The mitigation measures and APMs listed in Section 6 include the locations where these requirements apply and identifies what must be implemented prior to the commencement of construction. SDG&E will work closely with its construction contractor to ensure that site-specific mitigation measures and APMs are clearly identified and implemented. CPUC EMs will verify the implementation of mitigation measures and APMs prior to and during construction.

| Table 3. Preliminary Construction Schedule | | | | |
|---|--|--------------------------------------|-------------------------------|-----------------------------|
| Proposed Project Component | Activity | Approximate Duration (months) | Anticipated Start Date | Anticipated End Date |
| Proposed Vine Substation | Site Development and Grading | 4 | June 2016 | September 2016 |
| | Retaining Wall/Boundary Wall Construction | 4 | June 2016 | September 2016 |
| | Below-Grade Construction | 4 | September 2016 | December 2016 |
| | Substation Equipment Installation, Commissioning and Testing | 7 | December 2016 | June 2017 |

| Table 3. Preliminary Construction Schedule | | | | |
|---|--|--------------------------------------|-------------------------------|-----------------------------|
| Proposed Project Component | Activity | Approximate Duration (months) | Anticipated Start Date | Anticipated End Date |
| 12-kV Distribution Relocation | Duct Bank Construction and Vault Installation (Trench and Conduit) East of I-5 | 3 | June 2016 | August 2017 |
| | Duct Bank Construction and Vault Installation (Trench and Conduit) West of I-5 | 6 | November 2016 | April 2017 |
| | Cable Installation West of I-5 | 4 | February 2017 | May 2017 |
| | 12-kV Cutovers | 2 | June 2017 | July 2017 |
| | Jack-and-Bore | 0.75 | January 2017 | January 2017 |
| 69-kV Loop-in | Foundation Installation | 0.5 | November 2016 | November 2016 |
| | Pole Installation and Removal | 3.5 | Mid-November 2016 | February 2017 |
| | Conduit Installation and Cutover | 2 | January 2017 | February 2017 |
| Telecommunication System Extension | Duct Bank Construction and Vault Installation | 1 | April 2017 | April 2017 |
| | Cable Installation | 1 | May 2017 | June 2017 |

| Table 3. Preliminary Construction Schedule | | | | |
|--|---------------------------|-------------------------------|------------------------|----------------------|
| Proposed Project Component | Activity | Approximate Duration (months) | Anticipated Start Date | Anticipated End Date |
| Energization | Testing and Commissioning | 4 | March 2017 | June 2017 |
| | Energization | 0.5 | July 2017 | July 2017 |

2. Roles and Responsibilities

2.1 Implementation

SDG&E is responsible for implementing and maintaining all mitigation measures and APMs, and for obtaining and complying with all required permits and their requirements. The utility is responsible for ensuring that its agents and contractors comply with the MMCRP. SDG&E also is responsible for satisfying requests from jurisdictional agencies and will notify and copy the CPUC on all correspondences related to final approvals and verifications for the project if not otherwise copied on the correspondence.

Standards for successful mitigation are implicit in some mitigation measures, such as obtaining non-discretionary permits or avoiding a specific impact entirely. Additional resource avoidance or impact minimization conditions may be imposed by applicable agencies with jurisdiction through their discretionary permit processes, if any.

Important: SDG&E will inform the CPUC Project Manager in writing of mitigation measures or APMs that are not or cannot be successfully implemented. While the CPUC recognizes the need for flexibility post-decision in response to changed circumstances, it believes changes should be the exception, and it intends to ensure that any proposed change is subject to rigorous standards. Consequently, some requested changes may qualify for the process set forth in the MMCRP for minor project changes (see Section 4.3.3) while others may require the submittal of a Petition for Modification (PFM) pursuant to CPUC Rules of Practice & Procedure, Rule 16.4(a).

The CPUC, as Lead Agency, is responsible for ensuring that all mitigation measures and APMs are implemented in a timely fashion as specified, and that the CPUC EM verifies SDG&E's compliance with mitigation measures, APMs, and conditions of permits issued by other agencies. Other jurisdictional agency representatives may visit construction areas at any reasonable and safe time, and may require information regarding the status of compliance with particular mitigation measures or permits. Additional information on communication protocols is presented in Section 3.

2.2 SDG&E Roles and Responsibilities

The following describes the roles and responsibilities of key project personnel responsible for implementing the MMCRP, as well as their relationship to other staff working on the Project.

SDG&E Project Manager

SDG&E's Project Manager (PM) will oversee all construction activities. Specific responsibilities of the PM include, but are not limited to:

- Ensure compliance with project specifications, drawings, permit conditions, construction contracts and applicable codes
- Notify the SDG&E Environmental Project Manager (EPM) and Environmental Compliance Lead (ECL) of project schedule changes
- Work with SDG&E EPM to evaluate and improve the implementation of the MMCRP as construction progresses
- Regularly facilitate project meetings

SDG&E Contract Administrators and Construction Personnel

Construction activity will take place at any given time within multiple construction components. Construction contractors will have significant responsibilities for implementation of and compliance with the environmental requirements of the project. SDG&E Contract Administrators (CAs) will oversee the day-to-day construction activities conducted by SDG&E's construction contractors. The construction contractors will be responsible for incorporating all project environmental requirements into their day-to-day construction activities. Key environmental responsibilities for contractors' staff include, but are not limited to:

- Verify that all construction workers attend the project's Worker and Environmental Awareness Program prior to beginning work on the project
- Review and understand the environmental requirements
- Implement and maintain mitigation measure requirements and conditions during construction
- Respond to requests by SDG&E Environmental Resource Specialists and Lead Environmental Inspector during construction

SDG&E Environmental Project Manager

SDG&E's Environmental Project Manager (EPM) is responsible for providing the appropriate level of resources for successful implementation of the MMCRP. The EPM will provide management, direction, and leadership to the SDG&E Environmental Compliance Team. Specific responsibilities of the EPM include, but are not limited to:

- Direct the development and implementation of the pre-construction environmental planning, permitting, and compliance activities.
- Ensure the development and implementation of the Worker and Environmental Awareness Program (WEAP)
- Provide leadership and resources to assure compliance with the MMCRP
- Ensure frequent and clear communication between SDG&E environmental staff, construction personnel, resource agencies, and Lead Environmental Inspector
- Actively communicate with resource agencies, particularly in regards to the MMCRP
- Establish and support the lines of communication between the SDG&E environmental staff, construction personnel, resource agencies and Third-Party Monitors

SDG&E Environmental Compliance Lead

SDG&E's Environmental Compliance Lead (ECL) will provide oversight of all activities required for compliance of the MMCRP. The ECL will also provide coordination of activities for agriculture, transportation, fire and training. The ECL responsibilities include, but are not limited to:

- Coordinate and track the submittal process in order to receive Notices to Proceed
- Prepare Minor Project Refinement Request Forms or assist SDG&E contractors with the preparation of this requests
- Implement and ensure that construction personnel receive the WEAP
- Work closely with the CPUC EMs to evaluate the effectiveness of mitigation measures
- Actively communicate with the CPUC EMs, particularly in regards to the MMCRP
- Provide coordination with construction and engineering groups to assure mitigation measures are understood and implemented
- Assure frequent and clear communication between the SDG&E PM, SDG&E EPM, CAs, construction personnel, CPUC EMs, and Lead Environmental Inspector

SDG&E Environmental Specialists

SDG&E's Environmental Specialists will support the SDG&E EPM and ECL for successful implementation, planning, permitting and compliance activities required under the MMCRP. The Environmental Specialists responsibilities include, but are not limited to:

- Coordinate the activities of the biological, paleontological, cultural, hazardous materials, and stormwater mitigation measure requirements
- Coordinate the development and implementation of the pre-construction environmental planning, permitting, and compliance activities
- Actively communicate with all agencies respective to the above mitigation measure requirements
- Provide assistance to SDG&E's Lead Environmental Inspector

SDG&E Lead Environmental Inspector

SDG&E's Lead Environmental Inspector (LEI) will support the EPM and ECL for successful day-to-day field implementation of MMCRP. The LEI will assist the EPM and ECL in ensuring project compliance with the MMCRP through field inspections and first-line communication with the CAs, construction contractor foremen, and the CPUC EMs. The LEI's responsibilities include, but are not limited to:

- Coordinate with CPUC EMs as appropriate
- Coordinate the mobilization of other resource specialists, including biological, cultural, and paleontological resource specialists
- Conduct stormwater pollution prevention plan (SWPPP) inspections and coordinate with SDG&E's storm water Resource Specialist, as required
- Conduct on-going inspection of construction activities
- Coordinate the assessment of work area conditions ahead of construction and provide advance notice of conditions and situations that require specific awareness, planning, or notifications

- Work closely with the EPM, ECL, CAs and CPUC EMs to evaluate the effectiveness of mitigation measures
- Coordinate with the CAs and construction and engineering groups to ensure mitigation measures are understood and implemented
- Provide and document WEAP training for project personnel and maintain
- Complete daily inspection reports
- Assist the EMP and ECL with the preparation of Minor Project Refinement requests

SDG&E Specialty Environmental Monitors

APM CUL-01, APM CUL-02, mitigation measure (MM) C-1, and MM C-3 require qualified specialty monitoring during construction. The Specialty Environmental Monitors will provide oversight, protection and direction for compliance within their field of expertise at the applicable Construction areas.

Additional SDG&E Roles

SDG&E Public Affairs Manager

The SDG&E Public Affairs Manager provides information and guidance to both the Vine Substation Project Construction Management and Environmental Management Teams as needed.

SDG&E Environmental Law Department

The SDG&E Senior Counsel Environmental, for the Environmental Law Department provides information and guidance to both the Vine Substation Project Construction Management and Environmental Management Teams as needed.

Mitigation Compliance

SDG&E is responsible for successfully implementing all the adopted mitigation measures in the MMCRP. The MMCRP contains criteria that define whether mitigation is successful. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining nondiscretionary permits or avoiding a specific impact entirely. Additional mitigation success thresholds may be imposed by applicable agencies with jurisdiction through the discretionary permit process.

SDG&E shall inform the CPUC and its monitors in writing (i.e., Minor Project Refinement Request) of any mitigation measures that are not or cannot be successfully implemented and their proposed mitigation options to reduce the subject impact(s) to less than significant. The CPUC in coordination with its monitors and jurisdictional agencies will assess whether alternative mitigation is appropriate and specify in writing to SDG&E the subsequent actions required.

2.3 California Public Utilities Commission

2.3.1 CPUC Project Manager

The CPUC PM has overall responsibility for ensuring that mitigation measures and APMs are implemented as adopted by the CPUC. The CPUC PM will determine the compliance with the MMCRP based on the implementation of the measures included in the mitigation monitoring table in Section 6. The CPUC delegates field monitoring and reporting responsibilities to its third-party EMs during construction and will oversee their work through telephone calls and review of daily and weekly status reports. The CPUC PM will be notified of all noncompliance situations and may suggest measures to help resolve issue(s).

Important: The CPUC PM will issue NTPs for construction of each work package identified by SDG&E. However, the CPUC's NTP does not authorize construction to start if additional approvals are required and pending from other agencies and such approvals have not been obtained at the time of issuance of an NTP. *No construction may occur when other agency approvals are pending without specific approval by those agencies.*

2.3.2 CPUC Environmental Monitor (Aspen)

SDG&E has primary responsibility for ensuring that construction activities are conducted in accordance with approved Project mitigation measures, APMs, compliance plans, and permit conditions.

The overall monitoring program will be administered under the direction and oversight of the CPUC PM. The CPUC will delegate daily monitoring and reporting responsibilities to a third-party monitor (Aspen). The role of the CPUC third party monitor (Aspen) is to ensure that compliance is being achieved and to document compliance using verbal and written communications. The number of third-party monitors (CPUC EMs) and the frequency of site inspections will depend on the number of concurrent construction activities and their locations with respect to sensitive resources and land uses.

- **Aspen Monitoring Manager.** The Monitoring Manager supervises Aspen's CPUC EMs, determines the appropriate inspection frequency, and is responsible for weekly report preparation. The Monitoring Manager also serves as the main point of contact with the CPUC PM for major compliance matters.
- **Aspen CPUC Environmental Monitor (CPUC EM).** The CPUC EM will conduct random, spot-check monitoring and be the primary point of contact with in-field agency and project personnel. The CPUC EM will be an integral part of the project team and will stay apprised of construction activities and schedule changes, and will monitor construction activities for compliance with project mitigation measures, APMs, compliance plans, and permit conditions. The CPUC EM will document compliance through daily logs and provide input for the weekly reports. The CPUC EM shall note any issues or problems with implementation of mitigation/APM/permit conditions, notify the appropriate designated project members, and report problems to the CPUC PM. All other issues will be brought to the attention of the SDG&E field representative to address appropriately.

Important: In accordance with the protocols in this MMCRP, the enforcement authority of the CPUC EM in the field is limited to conditions posing imminent safety or resource endangerment concerns at a work location. The CPUC EM will not direct the contractor, but is authorized to temporarily stop work under these conditions if it is safe to do so. SDG&E will address the identified issues. Only the CPUC PM has authority to shut down the project completely.

3. Communication

Good communication is essential to successful implementation of an environmental mitigation compliance program. To avoid Project delays, CPUC and SDG&E environmental and construction representatives will interact regularly and maintain professional, responsive communications at all times. SDG&E representatives will coordinate closely with CPUC EMs throughout the monitoring effort to ensure that issues are addressed and resolved in a timely manner. To that end, this section provides a communication protocol for the timely and accurate dissemination of information to all levels of the Project regarding surveys, plans, mitigation measures, construction activities, and planned or upcoming work.

3.1 Communication Protocol

To ensure that the CPUC EM can get accurate information on ongoing surveys, construction work, and schedules, the following protocols have been established:

- The CPUC EM's primary point of contact will be the LEI. If not available, the ECL will be the point of contact. If issues arise and cannot be resolved at this level, the issue will be elevated to the CPUC EM Project Manager via e-mail or telephone.
- The LEI will inform the CPUC EM of all current and planned survey and construction activities, including status of permits and activity locations, in a timely manner. Timely notification must be sufficient to allow response time for the CPUC EM to be present for that activity.
- The CPUC EM and other designated agency representatives or staff may talk to anyone on the construction site to ask questions about their activity, but the construction personnel may opt to refer the CPUC EM to the LEI or other designated person. The LEI is the appropriate contact for obtaining information on construction activity schedules or construction practices.
- SDG&E will provide to the CPUC EM a list of all construction monitoring personnel and managers, identified by work package or component, title, and contact information. An updated list will be distributed as needed to keep all parties informed of monitor and staff additions/changes, as well as construction scheduling changes. This list of personnel, subsequent updates, and construction schedule changes will be distributed to all persons on the list throughout the construction process.
- The CPUC EM will continue to report compliance concerns first to the LEI and give them time to resolve compliance issues. If this includes discussions with resource agencies, documentation of such communication and any subsequent actions to be undertaken to achieve compliance will be provided to the CPUC EM. If the concern involves a permit, because SDG&E is the permit holder with jurisdictional agencies, the ECL will consult with the applicable resource agencies. If the CPUC EM has an ongoing unresolved concern about a mitigation measure that could affect a permit condition or could result in resource endangerment, the ECL will call the appropriate resource agency to discuss the issue. The EPM will take the lead in the coordination effort and in resolving the issue.
- The resource agencies will be notified immediately by the ECL of any substantive issues regarding endangerment of natural resources under their jurisdiction and of any actions taken to resolve the issue, consistent with permit requirements. In addition, the CPUC EM will receive immediate notification of these communications if not already aware of the issue and action.
- Prior to or subsequent to agency notification, the ECL, assisted by the EPM, will develop a plan to resolve the issue and will follow up with the respective agencies to explain the strategy and receive agency approval.
- SDG&E will expeditiously provide verbal notification and/or submit a preliminary electronic notification of a suspected event, followed by a timely submittal of a final notification that more fully characterizes the event, actions, and outcomes to the CPUC EM.
- The CPUC EM will not direct the contractor, but if a "take" of a biological resource is imminent or if there is a danger/hazard to a special status biological resource, the CPUC EM can request that work be stopped in that area immediately (as long as it can be done safely); this request should be made to the LEI or senior SDG&E person on site. At any time, anyone can order an activity to be halted temporarily if a take or a hazard is imminent.
- As required, conference calls will include a discussion of construction and compliance activities, with the CPUC EM, ECL, LEI, and agency staff participating.

3.2 Pre-Construction Compliance Coordination

Prior to construction, SDG&E is required by the terms of some project mitigation measures and APMs and permitting requirements of other agencies, to prepare various plans and obtain approval of these plans, in addition to performing surveys. During the pre-construction period, SDG&E will conduct meetings, conference calls, and site visits with the CPUC, technical representatives of the CPUC third-party monitor, and other agencies. The purpose of the pre-construction compliance coordination process is to:

- Discuss and document the status of all required SDG&E's submittals,
- Document the findings of data reviews and jurisdictional agency approvals,
- Review SDG&E submittals,
- Document the status of mitigation measures/APMs as they apply to the Project or work packages, and
- Discuss refinements or minor changes to the Project.

The goal of the pre-construction process is to complete all required actions so the CPUC and other agencies, as appropriate, can issue NTP authorizations for each Project work package.

Other pre-construction activities include the following:

- Inclusion of mitigation requirements in contract designs, instructions, and specifications
- Field verification of work locations to confirm any need for siting adjustments based on the presence of sensitive resources
- Field verification of any construction yard sites
- A pre-construction meeting was held on April 13, 2016 with SDG&E and CPUC EMs to review the project and construction schedule, and mutually agree upon the Project's communication protocol. Based on discussion at the meeting and ongoing input from each party, this MMCRP was updated.

3.3 Coordination during Construction

Many mitigation measures were derived from specific permit conditions or agency input. The CPUC EM, along with SDG&E, will be responsible for contacting resource agencies and immediately notifying them of issues arising with regard to matters under their jurisdiction. CPUC shall be copied on all correspondence (email or letter) and provided copies of documentation that flow between SDG&E and resource agencies. If an unresolved issue regarding compliance with a mitigation measure affects a permit requirement under the jurisdiction of a resource agency, the CPUC EM will contact the Environmental Compliance Lead and they will contact the agency to discuss resolution.

3.4 Ongoing Communication

Generally, problems encountered during construction can be resolved in the field through regular communication among the LEI, construction contractors, and CPUC EM. Field staff will be equipped with cell phones and will be available to receive phone calls at all times during construction. The Project contact list will be provided and updated as needed by SDG&E.

3.4.1 CPUC EM

The CPUC EM's primary point of contact in the field is the LEI. The CPUC EM will contact the LEI if an activity is observed that conflicts with one or more of the mitigation measures, APMs, or permit conditions, so that the situation can be corrected by SDG&E. If the CPUC EM cannot immediately reach the LEI, the ECL will be contacted to address the issue. Similarly, the CPUC EM will contact the LEI for information on where construction crews are working, the status of mitigation measures, and for schedule forecasts. The CPUC EM may discuss construction procedures directly with the construction contractors; however, SDG&E may require its construction contractors to defer questions to an onsite SDG&E representative. In all cases, the CPUC EM will contact the designated SDG&E representative if a problem is noted that requires action from the construction contractor or SDG&E.

Important: The CPUC EM will not direct the construction contractor, but will contact the designated SDG&E contact person. In the event an activity imposes an imminent threat to a sensitive resource or an undue risk, the CPUC EM will try to contact the LEI, who has the authority to stop work; however, if they are not immediately available, the CPUC EM has the authority to stop work at that location if it is safe to do so.

3.4.2 SDG&E

SDG&E will provide the CPUC and the CPUC monitoring team with a contact list identifying construction monitoring personnel and construction supervisory staff to contact regarding compliance. The contact list will include each person's title and responsibility, including the names of SDG&E and CPUC environmental staff, project managers, supervisory staff, and other members of the team. The list shall include phone numbers and e-mail addresses where team members can be reached during construction. The contact list will be updated and redistributed as necessary by SDG&E as new personnel are assigned to the Project. This list is confidential and will not be published or put on the CPUC project website.

SDG&E and/or its contractors will hold daily onsite meetings that the LEI will attend on an as-needed, regular basis. Prior to beginning the day's work at a job site, a tail-board briefing will be held by SDG&E and/or its contractor. Possible subjects include reemphasizing safety and identifying any specific safety concerns associated with that day's operation, potential environmental issues that workers should be aware of, etc.

3.5 Scheduled Communications

3.5.1 SDG&E Compliance Report

SDG&E will prepare and distribute a weekly environmental compliance status report for distribution to key team members, including the CPUC. The CPUC EM will review the weekly report to ensure that the status of mitigation measures, APMs, and permit conditions is consistent with observations in the field. Questions regarding the status of mitigation measures will be directed to the ECL. The weekly environmental compliance status report also will be a tool to keep all parties informed of construction progress and schedule changes.

3.5.2 Scheduled Progress Meetings

SDG&E will conduct weekly field meetings with construction managers, supervisors, SDG&E's environmental representatives, and other appropriate staff to discuss work completed, work anticipated for the following period, and the status of mitigation measures. The weekly field meetings also will provide a forum for discussing environmental compliance issues or concerns.

SDG&E may request that CPUC EM (and other agency EMs) participate in the field meetings to help resolve any issues that may have arisen during the previous period and to anticipate potential issues that may arise during upcoming activities. Alternatively, the ECL or the CPUC's EM may recommend a separate meeting to discuss mitigation, project change requests, or other Project-related issues. These meetings may be held at a designated office location or on the Project site.

3.5.3 Scheduled Conference Call

The ECL, EPM, CPUC PM, the CPUC EM, and other parties may participate in an as needed teleconference call. The teleconference calls will be scheduled for an agreed date and time and will be used to identify actual or potential issues and discuss solutions. The conference calls will focus on the MMCRP and project progress generally.

3.6 As-needed Interagency Conference Calls

From time to time during the pre-construction process or during construction, the CPUC, resource agencies, and/or SDG&E may determine that conference calls may be necessary or appropriate to discuss the status of specific mitigation compliance as they relate to permit requirements. These calls will be scheduled in advance, to the extent feasible, by e-mail, and will include the ECL. An agenda will be provided before the call.

4. Environmental Compliance and Field Procedures

4.1 Pre-Construction Compliance Verification

Prior to beginning construction, SDG&E is required by the terms of the mitigation measures, APMs, and various permits and approvals for other regulatory agencies, to prepare and obtain approval of various plans and to perform various surveys and studies. Copies of plans, surveys, and studies will be retained by Aspen and provided to the CPUC with all files at the completion of the Project. The plans, surveys, studies, and other documentation required to be completed by SDG&E before construction are identified in Section 6.

While these documents are being reviewed by the approving agencies, they also are reviewed by the CPUC and its representatives. Resource agencies also may be involved in the review of applicable plans and reports.

The CPUC EM, including project management staff and technical experts as needed, will review and provide comments on all mitigation plans and reports. As appropriate, resource agencies also may be involved in the review of applicable plans and reports, and may provide comments. Comments on submitted plans and reports will be provided to SDG&E to ensure that they adequately accomplish the intended reduction in impacts. For required local and State agency permitting/consultations, the CPUC EM will track SDG&E's progress as it relates to SDG&E's construction plans and project mitigation, APMs, and permitting requirements. Based on SDG&E's construction plans, CPUC may authorize construction to begin on a phased basis, and the CPUC EM will handle pre-construction compliance review accordingly. CPUC may issue NTPs for construction of each phase separately, as soon as pre-construction compliance is satisfactorily accomplished for that phase.

Important: Compliance with all pre-construction mitigation measures and APMs will be verified prior to construction, and construction may not start on any work package before SDG&E receives a written NTP from the CPUC PM and other necessary approvals, if any. In general, the CPUC will not issue an NTP until

all pre-construction requirements have been fulfilled for a given phase. To save time, SDG&E should identify all required workspace needs for each phase of construction prior to the start of active construction, so that the locations and their use can be included in the NTP.

4.1.1 Notice to Proceed Procedures

CPUC must issue an NTP before construction can start.

SDG&E will submit a formal request for an NTP. If needed, minor project change requests may be submitted by SDG&E with the NTP request for incorporation into the NTP (see Section 4.3.3 for minor project change submittal requirements). Where there may be multiple spreads or work sites, SDG&E may elect to request separate NTPs. Each separate NTP request will be applicable to a defined segment or aspect of the Project.

CPUC will review the NTP request and the applicable pre-construction requirements to ensure that all information required to process and approve the NTP is included. CPUC may request additional information or clarification as needed. Based on information provided in the request for an NTP and its review, CPUC will issue the NTP.

In general, an NTP request must include the following:

- A description of the work
- Detailed description of the location, including maps, photos, and/or other supporting documents
- Verification that all mitigation measures, permit conditions or requirements, APMs, project parameters, or other project stipulations that apply to the work covered by the NTP request have been met.
- In a case where some outstanding requirements cannot be met prior to issuance of the NTP, an outline of outstanding submittals and how they will be met prior to construction
- Up-to-date resource surveys or a commitment to conduct surveys and submit survey results prior to construction
- Cultural resource surveys or verification that no cultural resources will be significantly impacted
- Copies of permits issued by other agencies, including any requirements
- Date when construction is anticipated to begin and estimated duration of work

Section 6 lists the mitigation measures and APMs, the timing for implementation, and whether CPUC review or approval is required before construction can begin. For reference, each NTP issued by CPUC will reiterate CPUC and other agency conditions or requirements that must be satisfied either before work begins or during construction. The NTP will state whether pre-construction requirements in mitigation measures, APMs, and permits have been met, including the completion of any applicable surveys and studies to be undertaken. If compliance with some requirements cannot be met prior to NTP issuance, the reasons will be identified by SDG&E and noted in the NTP. At its discretion, CPUC may issue the NTP subject to specific conditions. In such an event, the NTP will clearly define any limitations that apply and the actions to be taken and documented by SDG&E prior to construction.

4.1.2 Compliance Reporting

The CPUC EM will perform compliance inspections throughout construction to ensure compliance with all applicable mitigation measures, APMs, plans, permits, and conditions of approval from CPUC and other agencies. The CPUC EM will document observations in the project area through field notes and digital

photography. The photographs will be incorporated in weekly reports and related to a discussion of specific construction or compliance activity. In addition, daily field logs documenting compliance of specific crews, construction activities, or resource protection measures will be maintained. Field logs will be used to prepare weekly reports and to track and update the status of mitigation measures listed in Section 6.

Site visits by CPUC may be coordinated with SDG&E or be unannounced. Supplemental information provided by SDG&E, including pre-construction submittals, survey reports, weekly reports, meeting notes, and agency correspondence also will be used to verify compliance.

Compliance documents and reports will be posted on the CPUC public website, accessible at:

<http://www.cpuc.ca.gov/environment/info/aspen/vine/vine.htm>

4.1.3 Compliance and Non-Compliance Levels

Project compliance and non-compliance levels that will be used and the specific actions by the CPUC monitoring team are as follows:

- **Level A Compliance.** All mitigation measures and permit conditions are being complied with and there are no violations. No corrective action is necessary.
- **Level B Non-Compliance.** One aspect of a mitigation measure is not in compliance, resulting in only partial implementation of a measure or permit condition, but there has been no significant impact as a result.

Action: A verbal notice shall be given to the Environmental Compliance Lead (or assigned designee) and corrective action shall be required of SDG&E within 1 day or other maximum period, as determined by the CPUC EM.

Follow up: If corrective action is not taken within the stated period, a Project Memorandum (written warning) will be issued. If a Level B Non-Compliance is allowed to continue, the non-compliant activity could result in a significant impact over time. Therefore, the frequency of Level B Non-Compliances will be tracked by the CPUC EM.

If corrective action is not taken or does not address Level B Non-Compliance trends, a Non-Compliance Report (NCR) will be issued. The NCR will state that failure to resolve the identified condition or situation may lead to a project stop work order and/or action under the CPUC's CEQA Citation Program.

- **Level C Non-Compliance.** One or more of the aspects of a mitigation measure or permit condition are not in compliance, and the implementation of a mitigation measure is deficient or non-existent, resulting in potentially significant impact(s) or an immediate threat of major, irreversible environmental damage or property loss.

Action: A verbal notice shall be given to the Environmental Compliance Lead (or assigned designee), followed immediately by an NCR sent to SDG&E's Environmental Compliance Lead (or assigned designee). Corrective action shall begin immediately.

Follow up: If corrective action is not taken immediately or the corrective action is insufficient, the CPUC EM shall notify the CPUC PM, Aspen Monitoring Manager, and Aspen Liaison, who will review courses of action available.

- **Level D Stop Work Order.** The CPUC has the authority to shut down project construction. Stop Work Orders halt construction and are issued when a compliance violation continues over an extended period of time, is repeated several times, or when a violation could cause harm to a resource.

Action: Based on the severity of a given infraction or pattern of non-compliant activity, the CPUC Energy Division Director may direct that all or some portion of the work be stopped. This order will be conveyed directly from the Director or through the CPUC PM.

Follow up: If a shutdown of construction or an activity is ordered, the construction or activity shall not resume until authorized by the Energy Division Director or CPUC PM in writing.

Important: CPUC also may exercise the CEQA Citation Program adopted by the Commission in Resolution E-4550. The program delegates authority to Commission staff to draft and issue citations and levy fines for non-compliance with a PTC or CPCN. The Resolution allows Commission staff to efficiently issue fines when needed to quickly address non-compliance issues that are occurring in the field.

A non-compliant event regarding environmental resources may involve other agencies, in which case:

- The CPUC EM will confirm that SDG&E has informed the applicable resource agency when non-compliant actions have the potential to harm an environmental resource or species (outside the reporting process associated with incidental takes as permitted by the resource agency).
- If timely notification is not made by SDG&E, the CPUC EM will contact the applicable resource agency.

If permit or resources issues are involved, the CPUC and/or resource agencies may order work stoppages and the development of strategies for successful resource/species protection, consistent with the applicable permit or mitigation measure.

Important: The CPUC EM does not have the authority to shut down or restart construction, nor shall the CPUC EM direct the work of a construction contractor or subcontractor. However, if an imminent threat to safety or an unpermitted risk to a sensitive resource is observed, the CPUC EM has the responsibility to advise the SDG&E or contractor site manager to immediately cease the threatening activity until the situation is rectified, as long the activity can be stopped safely. The CPUC EM shall immediately notify the CPUC PM and Aspen Monitoring Manager and report the status. If not action is taken by SDG&E in response to the situation, CPUC will determine next steps.

4.1.4 Compliance Reporting and Documentation

All non-compliant activity will be recorded and reported. Based on the severity of the non-compliant event, notice to CPUC will be immediate or in the weekly report.

The CPUC EM will determine whether the observed construction activities are consistent with mitigation measures, APMs, and project parameters as identified in the Final MND and adopted by the CPUC, as well as any applicable permit conditions. All observations and communications will be noted in a logbook. Deviations from mitigation measures, APMs, or permit conditions will be considered non-compliant events and will be documented.

4.1.5 SDG&E Reportable Events

Unanticipated events may occur that impact project personnel, public safety, or resources and may not be observed by the CPUC EM. While these events may not result in a deviation from or violation of a mitigation measure or permit condition, it is important that these events be reported to the appropriate agencies and the CPUC so they are in a position to respond to questions or concerns from the public or managers. Accordingly, SDG&E will immediately report these events to the CPUC and other regulatory agencies as appropriate. SDG&E will submit to the appropriate agency, if any, and to CPUC a final verbal or electronic notification characterizing the event, actions taken, and outcomes.

Examples of reportable events are:

- any event with the potential to have significant environmental impacts that a mitigation measure failed to address
- a violation of a permit condition
- an occurrence that posed or could have posed a risk to public health and safety
- any event requiring emergency response
- a “near miss” event involving construction equipment and, in SDG&E’s reasonable judgment, had the potential to result in serious bodily harm or death.

4.2 Dispute Resolution

The MMCRP is intended to reduce or eliminate potential disputes. However, even with the best preparation, differences in mitigation implementation approaches and interpretation may occur. Issues should first be addressed informally at the field level, between the CPUC EM and SDG&E’s Environmental Inspectors or Environmental Monitors, or at the regular progress meetings. Questions may be raised to the SDG&E Environmental Compliance Lead and the SDG&E Project Manager for resolution. Should the issue persist or not be resolved at these levels, the following procedures will be used.

- Step 1.** Differences in mitigation implementation approaches, disputes, and complaints (including those of the public) are directed to the CPUC PM for resolution. The PM will attempt to resolve the dispute with SDG&E’s EPM.
- Step 2.** If Step 1 fails to resolve the issue, the CPUC PM may initiate enforcement or compliance action to address deviations from the Project or the adopted MMCRP, if they have occurred without prior authorization. The CPUC Project Manager may issue a formal letter requiring corrective actions to address the unresolved or persistent deviations from the Project or adopted MMCRP.
- Step 3.** If the differences, dispute, or complaint cannot be resolved informally or through enforcement or compliance action by the CPUC, the affected participant in the dispute or complaint may file a written “notice of dispute” with the CPUC’s Executive Director. This notice should be filed in order to resolve the dispute in a timely manner, with copies concurrently served on other affected participants. Within 10 days of receipt, the Executive Director or designee(s) will meet or confer with the filer and other affected participants to resolve the dispute. The Executive Director will issue an Executive Resolution describing the decision, and serve the filer and other affected participants.
- Step 4.** If one or more of the affected parties is not satisfied with the decision as described in the resolution, such parties may appeal it to the Commission via a procedure to be specified by the Commission.

Involved parties may also seek review by the Commission through procedures specified in the Commission’s Rules of Practice and Procedure for formal and expedited dispute resolution, although a good faith effort should first be made to use the foregoing procedure.

Separate enforcement steps by the regulatory agencies may follow different steps or procedures. The CPUC PM and the Environmental Compliance Lead will coordinate with other permitting agencies for issues outside CPUC’s jurisdiction. Separate dispute resolution or enforcement steps solely involving other regulatory agencies would follow that agency’s procedures.

The dispute resolution process could occur concurrently with the communication protocol during construction for non-compliant events.

4.3 Project Refinements

4.3.1 Transition from Preliminary Design to Final Engineering

The MND for the Project was based on preliminary designs. SDG&E has been in the process of completing final project design and engineering. Some project component locations may have been refined as engineering progresses in order to comply with mitigation measures, avoid or minimize environmental impacts, and reduce or eliminate feasibility constraints.

Mitigation measure requirements were finalized at the time of project approval, and pre-construction compliance submittals will be reviewed based on the requirements in these measures. The process outlined below allows for changes in the case of unforeseen circumstances, as long as the intent of the mitigation measure is satisfied (i.e., the impact is mitigated as intended, consistent with residual impact determinations in the MND).

4.3.2 Project Changes

At various times throughout project construction (following approval of final design plans), changes to the Project requirements may be needed to facilitate construction or provide more effective protection of resources. When changes are necessary for specific field situations, SDG&E and CPUC, in consultation with the applicable resource agencies, will work together to find solutions that avoid conflicts with adopted mitigation measures.

4.3.3 Minor Project Changes

The CPUC PM, along with the CPUC Monitoring Team, will ensure that any process to consider minor project changes that may be necessary due to final engineering or variances or deviations from the procedures identified under the monitoring program is consistent with CEQA requirements.

- No project changes will be approved by the CPUC PM if they
 - would be located outside of the geographic boundary of the project study area, unless the change involves a Temporary Extra Work Space (TEWS) as defined in Section 4.3.4,
 - create new or substantially more severe significant impacts, or
 - conflict with any mitigation measure or applicable law or policy.
- Minor project changes are strictly limited to changes that
 - will not trigger other permit requirements unless the appropriate agency has approved the change, and
 - clearly and strictly comply with the intent of the mitigation measure or applicable law or policy.

This determination is ministerial, and shall be made by the CPUC PM. SDG&E must seek any other project changes by a Petition for Modification (PFM). Should a project change require a PFM, supplemental environmental review under CEQA would be required.

Requests for staff approval of a minor project change must be made in writing and should include the following:

- A detailed description of the proposed minor changes, including an explanation of why the refinements are necessary, and a reference to the approved documents.

- Photos, maps, and other supporting documentation illustrating the difference between: the existing conditions in the area, the approved project, and the proposed minor changes.
- The potential impacts of the proposed minor changes, including a discussion of each environmental issue area that could be affected by the minor changes with accompanying verification that there will be no substantial increase in the severity of any previously identified significant impacts to resources affected by the project and no new significant impacts, after application of previously adopted mitigation.
- Whether the minor changes conflict with any applicant proposed measures or mitigation measures.
- Whether the minor changes conflict with any applicable guideline, ordinance, code, rule, regulation, order, decision, statute or policy.
- Water/wetland/storm water related resource information if the minor changes would result in any additional land disturbance, road distance or width, changes to jurisdictional delineation of waters, or changes to water protection best management practices.
- Date of expected construction at the minor changes site area.

The CPUC PM may request additional information or a site visit in order to process the request. Examples of changes that may be approved by staff after final engineering include, but are not limited to:

- Adjusting the alignment or position of a project element to avoid unanticipated impacts related to cultural artifacts, buried utility infrastructure, hazardous and toxic substances, and other land use impacts including effects on homeowners.
- Adjusting the alignment or position of a project element to avoid or adapt to conditions on the ground that vary from the conditions that existed at the time of the original environmental analysis.

Important: The changes must be located within the geographic study area used in the original environmental analysis and must not create a new significant impact or a substantial increase in the severity of a previously identified significant impact.

To initiate a project minor changes request, SDG&E will complete a Project Minor Change Request Form (see Attachment B), prepare the appropriate supporting documentation, and obtain the required signatures. SDG&E will submit the completed Project Minor Change Request Form and supporting documentation by email (scanned copy) to the CPUC Project Manager with a copy to Aspen.

The CPUC Monitoring Team will review the request to ensure that all of the information required to process the minor project change is included, and then forward the request to the CPUC Project Manager for review and approval. The CPUC Project Manager may request a site visit from the CPUC EM, or may request additional information to process the request. In some cases, project minor changes may require approval by jurisdictional agencies as well.

All approved minor change requests will be tracked in the weekly reports.

4.3.4 Temporary Extra Work Space Procedures

For the purposes of this MMCRP, TEWS is defined as an existing workspace (i.e., no site preparation is required) that was not specifically identified and evaluated during the CEQA process but would be used by SDG&E during construction for a period of up to 60 days. Any such location required to be utilized for a period longer than 60 days will require a minor project change approval (see Section 4.3.3).

In the event that SDG&E determines a need for a construction TEWS, it must submit such a request to the CPUC, consistent with the communication protocol. SDG&E will not be permitted to use a TEWS prior to receiving written authorization from the CPUC. If appropriate, SDG&E will also send a copy of the TEWS to affected jurisdictional agencies.

SDG&E must demonstrate that:

- (1) the TEWS is located in a disturbed area with no sensitive resources or land uses onsite or within proximity of the proposed workspace such that they may be significantly impacted by the work,
- (2) SDG&E has permission of the landowner (e.g., municipality or private) to use the workspace, and
- (3) use of the TEWS will not result in any significant environmental impacts.

Following is a list of the specific information that SDG&E would be required to submit with its TEWS request:

- Date of request
- Location of the TEWS (detailed description, including maps if required)
- Property owner of TEWS
- An explanation of the need for the TEWS
- An analysis that demonstrates no new significant impacts will result from use of the TEWS including: compaction contributing to runoff rates or other stormwater/watershed effects; observed existing impacts to the site, such as old oil spills or other potentially hazardous or polluting substances; abandoned vehicles, equipment, or other materials; or other sensitive resources
- Biological and botanical surveys, if appropriate
- Cultural resource survey
- Duration and dates of expected use of the TEWS
- Details of the expected condition of the site after use

A sample TEWS form is included as Attachment C.

5. Records Management

Weekly status reports will be filed and used by the CPUC third-party EM to prepare a final environmental compliance report following the completion of construction. The final report will provide an overview of construction and a discussion of environmental compliance and lessons learned.

5.1 Public Access to Records

A publicly accessible website for the Project is maintained by the CPUC to make available current versions of reports and other documents prepared for mitigation compliance.

The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available by the CPUC for public inspection on request, consistent with critical infrastructure requirements, requirements to protect cultural resources, and General Order (G.O.) 66-C. In order to facilitate the public's awareness, the CPUC will post this MMCRP document, weekly reports, and other pertinent Project documents on the CPUC public website. Other monitoring compliance reports, copies of permits, and documents will be available in their final form on the Project website once

they are approved by the CPUC or other permitting agencies. Access to Critical Energy Infrastructure Information (CEII) documentation, the location of protected cultural resources, and other information meeting the standards for non-disclosure set forth in G.O. 66-C will not be available on the public website.

The CPUC public website is accessible at:

<http://www.cpuc.ca.gov/environment/info/aspen/vine/vine.htm>

6. Mitigation Measures and APMs

The following tables include the mitigation measures and APMs from the adopted MND. The tables indicate the resource of concern, the measure to be implemented, the monitoring requirement, and when the measure is to be implemented (pre- or during-construction; no post-construction mitigation requirements).

| Impact | Applicant Proposed Measure (APM) or Mitigation Measure | Monitoring Requirement | Timing of Action |
|--------------------------------|--|--|--|
| Air Quality | | | |
| Construction-Phase Air Quality | <p>AQ-3 Develop Fugitive Dust Control Plan for the Vine Substation. The Applicant shall develop a Fugitive Dust Control Plan to reduce Particulate Matter (PM) 10 and PM2.5 emissions during construction of the Vine Substation. The implementation of this Plan shall be considered complete when the Vine Substation's final surfacing, as required in part c.viii below, is done. The Fugitive Dust Control Plan shall include:</p> <ol style="list-style-type: none"> Name(s), address(es), and phone number(s) of person(s) responsible for the preparation, submission, and implementation of the Plan; Listing of all fugitive dust emissions sources included in the construction of the substation. The following on-site dust control measures, and any other proposed control measures, that will be implemented: <ol style="list-style-type: none"> All on-site unpaved areas used by on-road vehicles shall be watered or stabilized with an Air Resources Board-certified soil stabilizer at a sufficient frequency such that no visible dust emissions occur when on-road vehicles traverse unpaved areas on the substation site. All material excavated or graded shall be sufficiently watered to prevent excessive dust. Watering will occur as needed with complete coverage of disturbed areas. Excavated soil piles shall be watered as needed and in compliance with San Diego Air Pollution Control District (SDAPCD) Rule 55 requirements for the duration of construction or covered with temporary coverings. Construction activities, but not dust control activities, which occur on unpaved surfaces shall be discontinued during windy conditions when those activities cause visible dust plumes that extend beyond the substation fence line, or in violation with SDAPCD Rule 55 requirements. Track-out shall be removed at the conclusion of each workday. Shaker plates and gravel beds, or equivalently or more effective track-out control, shall be used and maintained throughout the construction period until the site is paved to remove bulk material from tires and vehicle undercarriages before vehicles exit the Vine Substation property. All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions) or watered, and shall maintain at least two feet of freeboard to reduce spillage from the haul truck. Traffic speeds for on-road vehicles and off-road equipment on unpaved areas/temporary roads shall be limited to 15 miles per hour. The substation's interior asphalt access road shall be paved as soon as practical during construction. The remaining surface of the substation site shall consist of concrete pads or be graveled, so that there are no open soil areas other than those that are within any vegetated professionally landscaped areas of the site. Concrete and gravel surfaces shall be completed as soon as practical during construction. Other fugitive dust control measures as necessary to comply with SDAPCD Rule 55 requirements. | Perform on-site inspections during construction to ensure control measures are properly implemented. | Submit Fugitive Dust Control Plan at least 30 days prior to construction to CPUC for review and approval; Implement during construction. |

| Impact | Applicant Proposed Measure (APM) or Mitigation Measure | Monitoring Requirement | Timing of Action |
|-----------------------------|--|--|--|
| Biological Resources | | | |
| APM BIO-1 | <p>A nighttime emergent bat survey will be conducted no more than five days prior to the removal of the palm trees located on the proposed Vine Substation Site. During This survey, an AnaBat System will be used to detect bat activity in the vicinity of the trees, and the trees will be visually monitored for the emergence of bats. This survey will be conducted from 30 minutes prior to sunset to 90 minutes after sunset. Following the survey, the tree removal will proceed as follows:</p> <ul style="list-style-type: none"> ▪ If no bats are detected during the emergent survey, the trees will be removed within five days. If the trees are not removed within five days, the emergent survey will be repeated. ▪ If bats are detected in the trees outside of the pupping season (typically April through July), emergent surveys will be repeated. If no bats are detected for two consecutive nights, the trees will be removed within five days. If the trees are not removed within five days, the emergent survey will be repeated. ▪ If bats are detected in the trees during the pupping season, tree removal will wait until the end of pupping season and the emergent surveys will be repeated. <p>In addition to the above pre-construction survey San Diego Gas & Electric will perform quarterly day/night emergent surveys (one night each quarter) between now and the start of construction to confirm presence/absence of bats at each palm tree.</p> | Review bat survey results and ensure recommendations are implemented | Prior to construction |
| Cultural Resources | | | |
| Paleontological Resources | <p>C-1 Paleontological Resource Mitigation Plan. A Paleontological Resource Mitigation Plan (PRMP) shall be prepared by a Qualified Paleontologist in accordance with Society of Vertebrate Paleontology Guidelines (2010). The PRMP shall identify construction impact areas with the potential of encountering significant resources and the approximate depths at which those resources are likely to be encountered. The PRMP shall outline a coordination strategy to ensure that one or more qualified paleontological monitors will conduct full-time monitoring of all ground disturbance in sediments determined to have a high to moderate sensitivity (i.e., the Bay Point Formation, and the underlying Lindavista and San Diego Formations, if encountered). The PRMP shall detail the significance criteria to be used to determine which resources will be avoided or recovered for their data potential. The PRMP shall also detail methods of recovery, preparation and analysis of specimens, final curation of specimens at an accredited repository, data analysis, and reporting. The PRMP shall be submitted to the CPUC for review and approval at least 30 days before the start of construction.</p> | Review plan and monitor implementation during construction | Submit PRMP at least 30 days prior to construction to CPUC for review and approval |
| | <p>C-2 Train Construction Personnel. Prior to the start of construction, all field personnel shall receive a worker's environmental awareness training module on paleontological resources. The training shall provide a description of the fossil resources that may be encountered in the Project area, outline steps to follow in the event that a fossil discovery is made, and provide contact information for the Qualified Paleontologist and onsite monitor(s). The training shall be developed by the Qualified Paleontologist and may be conducted concurrent with other environmental training (e.g., cultural and natural resources awareness training, safety training, etc.).</p> | Training provided by Qualified Paleontologist | Prior to construction |

| Impact | Applicant Proposed Measure (APM) or Mitigation Measure | Monitoring Requirement | Timing of Action |
|--|---|---|---------------------|
| Hazards and Hazardous Materials | | | |
| APM HAZ-01 | <p>Prior to approval of the final construction plans for the Proposed Project, a project-specific Hazardous Materials and Waste Management Plan will be prepared for the construction phase of the Proposed Project to ensure compliance with all applicable federal, state, and local regulations. The Hazardous Materials and Waste Management Plan will reduce or avoid the use of potentially hazardous materials for the purposes of worker safety, protection from groundwater contamination, and proper disposal of hazardous materials. The plan will include the following information related to hazardous materials and waste, as applicable:</p> <ul style="list-style-type: none"> ▪ A list of the hazardous materials that will be present on site during construction, including information regarding their storage, use, and transportation; ▪ Any secondary containment and countermeasures that will be required for onsite hazardous materials, as well as the required responses for different quantities of potential spills; ▪ A list of spill response materials and the locations of such materials at the Proposed Project site during construction; ▪ A list of the adequate safety and fire suppression devices for construction activities involving toxic, flammable, or exposure materials; ▪ A description of the waste-specific management and disposal procedures that will be conducted for any hazardous materials that will be used or are discovered during construction of the Project; and ▪ A description of the waste minimization procedures to be implemented during construction of the Project. | Review plan and monitor implementation during construction. | During construction |

| Impact | Applicant Proposed Measure (APM) or Mitigation Measure | Monitoring Requirement | Timing of Action |
|--------------------|--|---|---------------------|
| Noise | | | |
| Construction Noise | <p>N-1 Municipal Code Non-Compliance Approval or Prepare Construction Noise Control Plan. Prior to a Notice to Proceed, SDG&E shall complete one of the following (a) or (b):</p> <p>(a) Obtain written authorization(s) from the City of San Diego allowing construction of the Project to exceed the noise performance standards identified in Municipal Code Chapter 5, Article 9.5, Division 4, Section 59.5.0404(b). Official copies of the written authorization(s) shall be submitted to the CPUC.</p> <p>(b) Prepare a detailed Construction Noise Control Plan (Plan) for review by the City of San Diego. Official copies of the Plan shall be submitted to the CPUC. The Plan is intended to minimize noise from construction activities to the maximum extent feasible at work areas within 130 feet of residences. The Plan must include, but not be limited to:</p> <ul style="list-style-type: none"> Methods to reduce mobile and stationary construction noise levels, to the maximum extent feasible, occurring within 200 feet of sensitive receptors (i.e., residences) or expected to exceed 75 A-Weighted sound level (dBA) during the 12-hour period from 7:00 a.m. to 7:00 p.m. Methods to reduce mobile and stationary construction noise levels, to the maximum extent feasible, occurring outside the 12-hour period from 7:00 a.m. to 7:00 p.m. assuming the requirements of Mitigation Measure N-2 are met. Any conditions or performance standards required by the City of San Diego or CPUC through the implementation of Mitigation Measure N-2 shall be met. Identification of heavy truck trip routes accessing the Vine Substation site, construction staging yards, 12-kilovolt distribution circuits, and telecommunication routes to reduce travel on residential streets and avoid noise sensitive receptors to the maximum extent feasible. The Plan shall detail how SDG&E and its contractor(s) will respond to noise complaints, and how to document the resolution of those complaints. <p>In addition to completing either (a) or (b) above, SDG&E shall:</p> <ul style="list-style-type: none"> Establish a telephone number for use by the public to report any nuisance noise conditions associated with construction activities. SDG&E shall ensure that a public liaison is assigned to respond to all public construction complaints in a timely manner, and either (a) the telephone number is staffed by the public liaison during construction hours; or (b) the phone number is connected to an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. Public complaints shall be forwarded to the CPUC within 48 hours. This telephone number shall be posted at entrances to work areas and construction yards in a manner visible to passersby. SDG&E and its contractor(s) shall respond to public complaints and document the resolution of those complaints. Methods for conflict resolution shall be documented in the event a noise complaint cannot be resolved. | Review City of San Diego authorization(s) or Construction Noise Control Plan; monitor requirements of the authorization(s) or plan; Review public complaints logs monthly | During construction |

| Impact | Applicant Proposed Measure (APM) or Mitigation Measure | Monitoring Requirement | Timing of Action |
|---|---|---|----------------------------------|
| Traffic/Transportation | | | |
| Construction Traffic and Emergency Response | <p>T-1 Construction Traffic Control Plan. Prior to the start of construction, SDG&E shall prepare and submit a Construction Traffic Control Plan for review and/or approval to the all agencies with jurisdiction over public roads and transportation facilities that would be directly affected by the construction activities and/or would require permits and approvals. Official copies of the Construction Traffic Control Plan shall be submitted to the CPUC.</p> <p>The Construction Traffic Control Plan shall include, but not be limited to:</p> <ul style="list-style-type: none"> • The locations and use of flaggers, warning signs, lights, barricades, delineators, cones, arrow boards, etc. according to standard guidelines outlined in the Manual on Uniform Traffic Control Devices, the Standard Specifications for Public Works Construction, and/or the California Joint Utility Traffic Control Manual. • Additional methods to reduce temporary traffic delays to the maximum extent feasible. • Defining methods to coordinate with all agencies responsible for encroachment permits throughout construction to minimize cumulative lane disruption impacts should simultaneous construction projects affect shared segments/portions of the circulation system. • Prior to the start of construction, provide (or identify the timing to provide) copies of all approved permits and agreements to the CPUC and methods to comply with all specified requirements, including but not limited to: <ul style="list-style-type: none"> — Public Right-of-Way Permit from the City of San Diego. — Right-of-Entry Permit(s) from the North County Transit District (NCTD) and San Diego Metropolitan Transit System (MTS). — License Agreement from the MTS. — Temporary Occupancy Agreement and a Utility Agreement License from Burlington Northern Santa Fe Railway. • Plans to coordinate in advance with emergency service providers to avoid restricting the movements of emergency vehicles. Police departments and fire departments shall be notified in advance by SDG&E of the proposed locations, nature, timing, and duration of any roadway disruptions, and shall be advised of any access restrictions that could impact their effectiveness. At locations where roads will be blocked, provisions shall be ready at all times to accommodate emergency vehicles, such as immediately stopping work for emergency vehicle passage, providing short detours, and developing alternate routes in conjunction with the public agencies. Documentation of the coordination with police and fire departments shall be provided to the CPUC prior to the start of construction. • Provisions for ensuring detours or safe movement through all affected pedestrian and bicycle facilities. • Plans to coordinate with affected bus transit agencies (where applicable) at least one month prior to construction to minimize the impacts associated with the interruption of bus transit service. Documentation of the coordination with bus transit companies shall be provided to the CPUC prior to the start of construction. | Review Traffic Control Plan; monitor requirements of the plan | Prior to and during construction |

Note: Applicant Proposed Measures (APMs) appear in the Proponent's Environmental Assessment (A.14-05-021), with the exception of APM-BIO-01 which was provided by SDG&E in response to Energy Division Deficiency Request 01 dated February 2, 2015. APM CUL-01 was revised by SDG&E September 4, 2015.

| Table 4-B. Mitigation Monitoring Plan- During Construction Measures | | | |
|---|--|--|--|
| Impact | Applicant Proposed Measure (APM) or Mitigation Measure | Monitoring Requirement | Timing of Action |
| Air Quality | | | |
| Construction-Phase Air Quality | AQ-1 Control Off-road Equipment Emissions. Off-road equipment with engines larger than 50 horsepower shall have engines that meet or exceed U.S. Environmental Protection Agency/California Air Resources Board Tier 3 Emissions Standards. Exceptions will be allowed only on a case-by-case basis for two specific situations: (1) an off-road equipment item that is a specialty, or unique, piece of equipment that cannot be found with a Tier 3 or better engine after a due diligence search; and/or (2) an off-road equipment item that will be used for a total of no more than 10 days. Additionally, off-road equipment engine idling shall not exceed five (5) minutes unless required for proper operation and all engines shall be maintained in good operating condition and in tune per manufacturers' specification. | Perform on-site inspections during construction to ensure control measures are properly implemented. | During construction |
| Construction-Phase Air Quality | AQ-2 Control On-road Equipment Emissions. All construction on-road vehicle engines, with the exception of personal vehicles, shall be turned off when not in use. Engine idling shall not exceed five (5) minutes, unless required for proper operation or personnel health and safety (e.g., shelter from the elements). All construction on-road vehicle engines, with the exception of personal vehicles, shall be maintained in good operating condition and in tune per manufacturers' specification. | Perform on-site inspections during construction to ensure control measures are properly implemented. | During construction |
| Construction-Phase Air Quality | AQ-3 Implement Fugitive Dust Control Plan for the Vine Substation. | Perform on-site inspections during construction to ensure control measures are properly implemented. | Submit Fugitive Dust Control Plan at least 30 days prior to construction to CPUC for review and approval; Implement during construction. |
| Biological Resources | | | |
| APM BIO-1 | A nighttime emergent bat survey will be conducted no more than five days prior to the removal of the palm trees located on the proposed Vine Substation Site. During This survey, an AnaBat System will be used to detect bat activity in the vicinity of the trees, and the trees will be visually monitored for the emergence of bats. This survey will be conducted from 30 minutes prior to sunset to 90 minutes after sunset. Following the survey, the tree removal will proceed as follows: <ul style="list-style-type: none"> ▪ If no bats are detected during the emergent survey, the trees will be removed within five days. If the trees are not removed within five days, the emergent survey will be repeated. ▪ If bats are detected in the trees outside of the pupping season (typically April through July), emergent surveys will be repeated. If no bats are detected for two consecutive nights, the trees will be removed within five days. If the trees are not removed within five days, the emergent survey will be repeated. ▪ If bats are detected in the trees during the pupping season, tree removal will wait until the end of pupping season and the emergent surveys will be repeated. | Review bat survey results and ensure recommendations are implemented | Prior to construction |

| Table 4-B. Mitigation Monitoring Plan- During Construction Measures | | | |
|---|---|--|---------------------|
| Impact | Applicant Proposed Measure (APM) or Mitigation Measure | Monitoring Requirement | Timing of Action |
| Cultural Resources | | | |
| APM CUL-01 | <p>An archaeological monitor(s) familiar with the types of prehistoric and historic resources that could be encountered within the Project area will be present during initial ground-disturbing activities associated with the Vine Substation. In addition, an archaeological monitor(s) will be present during all trenching activities associated with the underground 12-kilovolt lines along Kettner Boulevard. In the event that cultural resources are discovered, the archaeological monitor will have the authority to divert or temporarily halt ground disturbance to allow evaluation of the potentially significant cultural resources. The archaeological monitor will contact San Diego Gas & Electric's (SDG&E's) Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The archaeological monitor, in consultation with SDG&E's Cultural Resource Specialist, will determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities in the vicinity of the discovery are allowed to resume. For significant cultural resources, a Research Design and Data Recovery Program would be prepared and carried out to mitigate impacts. All collected cultural remains will be cleaned, cataloged, and permanently curated with an appropriate institution. All artifacts will be analyzed to identify function and chronology as they relate to the history of the area. Faunal material will be identified to the species level. If locomotive and/or electric rails are discovered during construction and fall within a recommended period of significance, and cannot be preserved in place, they will be immediately documented using standard documentation. All materials that cannot be preserved in place will be offered to the Pacific Southwest Railway Museum for preservation. If preservation is not feasible, the monitor will photograph, map and document the location of the resource and summarize the results in a Department of Parks and Recreation (DPR 523) form that will be submitted to the South Coastal Information Center (SCIC). A monitoring results report—which includes appropriate graphics and describes the results, analyses, and conclusions of the monitoring program—will be prepared and submitted to SDG&E's Cultural Resource Specialist and Environmental Project Manager following completion of the program. Any cultural sites or features encountered will be recorded on appropriate Department of Parks and Recreation forms. All forms and reports will be submitted to the SCIC at San Diego State University and to the City of San Diego Development Services Department.</p> | On-site archaeologist monitors during construction | During construction |

| Table 4-B. Mitigation Monitoring Plan- During Construction Measures | | | |
|---|---|--|-----------------------|
| Impact | Applicant Proposed Measure (APM) or Mitigation Measure | Monitoring Requirement | Timing of Action |
| APM CUL-02 | A paleontological monitor will be on site to observe excavation operations that involve the original cutting of deposits with high paleontological resource sensitivity (i.e., Bay Point Formation) to depths greater than 3.5 feet. In the event that fossils are encountered, the paleontological monitor will have the authority to divert or temporarily halt construction activities in the area of discovery to allow the recovery of fossil remains. The paleontological monitor will contact San Diego Gas & Electric's (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, will determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume. When fossils are discovered, a paleontologist (or the paleontological monitor) will recover them, along with pertinent stratigraphic data. Fossil remains collected during monitoring and salvage would be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections. | Monitoring by Paleontologic Resource Specialist during construction excavations | During construction |
| | C-2 Train Construction Personnel. The training may also be videotaped or presented in an informational brochure for future use by field personnel not present at the start of the Project. | Training provided by Qualified Paleontologist | Prior to construction |
| | C-3 Monitor Construction for Paleontological Resources. Consistent with Mitigation Measure C-1 (Paleontological Resource Mitigation Plan), full-time construction monitoring shall be conducted by the qualified paleontological monitor(s) within previously undisturbed sediments in areas determined to have high to moderate sensitivity (i.e., the Bay Point Formation, and the underlying Lindavista and San Diego Formations, if encountered). Monitoring shall entail the visual inspection of excavated or graded areas and trench sidewalls. The monitor may also screen sediments to check for the presence of microvertebrates, if they are believed to be present. In the event that a paleontological resource is discovered, the monitor shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance, and collected. | Monitoring by Paleontologic Resource Specialist during construction excavations | During construction |
| Human Remains | C-4 Treatment of Human Remains. If human remains are unearthed during construction activities, construction work in the immediate area of the discovery shall be halted and directed away from the discovery until the county coroner can determine whether the remains are those of a Native American. If they are those of a Native American, the following would apply: a. The coroner shall contact the Native American Heritage Commission. b. If discovered human remains are determined to be Native American remains, and are released by the coroner, these remains shall be left in situ and covered by fabric or other temporary barriers. c. The human remains shall be protected until SDG&E and the Most Likely Descendant, as designated by the Native American Heritage Commission, come to a decision on the final disposition of the remains. According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and willful disturbance of human remains is a felony (Section 7052). | Any discovered human remains are treated according to agency-approved mitigation and in compliance with State and federal regulations. | During construction |

| Table 4-B. Mitigation Monitoring Plan- During Construction Measures | | | |
|---|---|---|----------------------------------|
| Impact | Applicant Proposed Measure (APM) or Mitigation Measure | Monitoring Requirement | Timing of Action |
| | Hazards and Hazardous Materials | | |
| APM HAZ-01 | Implement the Hazardous Materials and Waste Management Plan. | Review plan and monitor implementation during construction. | During construction |
| | Noise | | |
| Construction Noise | N-1 Municipal Code Non-Compliance Approval or Prepare Construction Noise Control Plan. <ul style="list-style-type: none"> A log of all complaints and the current status shall be provided to the CPUC monthly. | Review City of San Diego authorization(s) or Construction Noise Control Plan; monitor requirements of the authorization(s) or plan; Review public complaints logs monthly | During construction |
| | N-2 Construction Work Hours Authorization. Construction activities shall not occur during the following hours and days without obtaining all necessary authorization(s) from the City of San Diego allowing for construction to occur outside the hours allowable within Municipal Code Chapter 5, Article 9.5, Division 4, Section 59.5.0404(a). SDG&E shall provide copies of City authorizations to the CPUC. <ul style="list-style-type: none"> Between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, on legal holidays as specified in Section 21.04 of the City of San Diego Municipal Code, or on Sundays. | On-site monitoring | During construction |
| | Traffic/Transportation | | |
| Construction Traffic and Emergency Response | T-1 Implement the Construction Traffic Control Plan. | Review Traffic Control Plan; monitor requirements of the plan | Prior to and during construction |

B. Initial Study

B.1 Project Description

San Diego Gas and Electric (SDG&E) proposes to construct and operate the Vine 69/12 Kilovolt (kV) Substation Project (Proposed Project). The Vine Substation Project is proposed to be located within the southwestern portion of the City of San Diego, California near the San Diego International Airport. The Proposed Project includes four major components: (1) construction of the proposed Vine Substation, located at 3548 Kettner Boulevard at the corner of Vine Street and Kettner Boulevard (SDG&E, 2015a); (2) relocation of several 12-kV distribution circuits within City of San Diego public streets; (3) loop-in of an existing 69-kV power line to the new substation, and (4) upgrade of an existing telecommunication system. The Project is proposed to meet existing and anticipated customer-driven electrical load growth, and to improve distribution equipment reliability to prevent potential long outages or disruption of service to existing SDG&E customers in downtown and the surrounding area.

The location of the Proposed Project is depicted in Figure B.1-1 (Project Location Map), and the four components of the Proposed Project are depicted in Figure B.1-2 (Project Overview Map). Detailed maps are provided in Figure B.1-3a-k (Detailed Project Components). Figures B.1-2 and B.1-3a-k have been revised to show the 12-kV optional alignment. All figures are provided at the end of Section B.1.

The analysis in this document is based on documentation submitted by SDG&E including the Proponent's Environmental Assessment (PEA) in May 2014, PEA Supplement in February 2015, and responses to data requests.

B.1.1 Project Title

San Diego Gas and Electric's Vine 69/12-kV Substation Project

B.1.2 Project Sponsor's Name and Address

San Diego Gas and Electric Company
8330 Century Park Court, CP32D
San Diego, California 92123

B.1.3 Lead Agency Name and Address

California Public Utilities Commission
Energy Division
505 Van Ness Avenue, Fourth Floor
San Francisco, California 94102

B.1.4 Lead Agency Contact Person and Phone Number

Eric Chiang, Project Manager
Energy Division
California Public Utilities Commission
505 Van Ness Avenue, Fourth Floor
San Francisco, California 94102
(415) 703-1956

B.1.5 Project Location

The proposed Vine Substation Project is located in the southwestern portion of the City of San Diego, California approximately two miles northwest of downtown San Diego and directly adjacent to and east of the San Diego International Airport (also known as Lindberg Field). The main activity associated with the Proposed Project involves the construction of the proposed Vine Substation, which would be located at 3548 Kettner Boulevard. The 1.5-acre substation site is approximately rectangular in shape, and is located on the southwest corner of Kettner Boulevard and Vine Street (see Figure B.1-2). The substation site is currently accessed by a gate located off Vine Street. The site is owned by SDG&E and has been leased for use as a Park 'N Fly Airport Parking lot. The Park 'N Fly Airport Parking lot is being relocated to a more centralized rental car facility, which is currently under construction near the airport. The parcel is bordered to the north by Vine Street and a commercial printing business across Vine Street, to the south by an Advantage Rental Car facility, to the east by Kettner Boulevard, and to the west by the North County Transit District Coaster and San Diego Metropolitan Transit System (MTS) Trolley rail tracks. The area is characterized by light- and medium-industrial and office uses, parking lots, and rental car facilities. The substation site is currently surrounded by a chain link fence, and paved with asphalt. The site includes approximately 220 parking stalls, a guard shack, wooden storage shed, and portable toilet.

The Proposed Project also involves the relocation of distribution circuits and looping in of an existing 69-kV power line. The 69-kV loop-in would use the existing overhead power line located adjacent to and to the west of the proposed substation site. The 69-kV loop in would involve removing two existing poles and one stub guy pole near the corner of California Street and Vine Street, replacing one existing distribution pole with a new self-supported tubular steel pole (TSP), and installing two new TSPs. The 69-kV Loop in is described in greater detail in Section B.1.10.3 (69-kV Loop In). The 12-kV distribution circuit relocations involve the alteration of nine distribution circuits. These circuits would be routed through new and existing underground conduits in City streets including:

- | | |
|---------------------|--|
| ■ Columbia Street | ■ Vine Street |
| ■ India Street | ■ West Laurel Street |
| ■ Kettner Boulevard | ■ West Hawthorn Street |
| ■ Pacific Highway | ■ West Palm Street |
| ■ Sassafras Street | ■ West Redwood Street (original alignment) |
| ■ State Street | |

The 12-kV distribution circuit relocations are described in more detail in Section B.1.10.2 (12-kV Distribution Relocation).

The location of the Proposed Project is depicted in Figure B.1-1 (Project Location Map), and the four major components are depicted in revised Figure B.1-2 (Project Overview Map). Detailed maps are provided in revised Figure B.1-3a-k (Detailed Project Components). All figures are provided at the end of Section B.1. A more detailed description of the area within and around the Proposed Project is provided in Section B.1.6.

B.1.6 Surrounding Land Uses and Setting

Northwest of the Vine Substation site across Vine Street is a commercial property occupied by Rush Press, and across California Street is a parking lot partially used for rental car parking (Honeywell

property); to the northeast across Kettner Boulevard, I-5 Freeway, and India Street are a gasoline service station, commercial properties, and a residence; to the southeast is a vacant rental car facility including a car wash, fueling area, and parking lot; and to the southwest across a railroad corridor and Pacific Highway are parking lots (see Figure B.1-2).

Existing uses along the distribution circuit route within Kettner Boulevard include I-5 to the east and rental car facilities, offices, and airport parking lots to the west. Along India Street, existing uses include a gas station, a rental car facility, residential uses, and a mix of commercial and industrial uses. Existing uses along West Redwood Street and Columbia Street are predominately residential, with I-5 to the west. Budget and Alamo rental car facilities are located on West Palm Street west of I-5; residential uses are along West Palm Street east of I-5 (applies only to optional alignment). Along West Laurel Street, uses consist of offices, parking lots, and residences. Along State Street, existing uses include offices and residences. The relocation process would utilize a combination of existing and new underground distribution conduits, as depicted in Figure B.1-2 (Project Overview Map) and in Figure B.1-3a-k (Detailed Project Components).

B.1.7 General Plan Designation

The CPUC has preemptive jurisdiction over the Proposed Project because it authorizes the construction, operation, and maintenance of public utility facilities. Although such projects are exempt from local land-use and zoning regulations and permitting, CPUC General Order 131-D Section 1X.B states that “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the Commission’s jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters.” SDG&E has consulted with local agencies and considered local and State land use plans as part of the environmental review process.

Based on the City of San Diego General Plan, the proposed Vine Substation and 69-kV loop-in would be located on a site that is designated Industrial Employment. Lands adjacent to the relocated distribution circuits have a General Plan designation of Industrial Employment at the northern end of the line and Multiple Use and Commercial Employment Retail and Services at the southern end. A wide variety of land uses are specified as being appropriate within these designations, including offices, general commercial uses, civic facilities, and light and heavy industrial uses. While utility uses are not explicitly designated as being allowed under these General Plan designations, the General Plan specifically discusses the need to integrate design elements and space requirements necessary for public utilities into planning efforts throughout the City. Figure B.1-4 (Land Use Map) presents a depiction of the general land use categories within the Project area. Table B.1-1 details the various designations and land uses within the Project area.

Due to the large size of the City of San Diego, the City’s General Plan Land Use Element includes community plans for specific geographic areas. The Proposed Project is located within the boundaries of the Midway/Pacific Highway Corridor Community Plan and Downtown Community Plan. Additionally, portions of the Proposed Project are located within the boundary of the Uptown Community Plan. All three plans are local coastal programs in the area. The substation site and 69-kV loop-in would be located within the Light Industrial community plan land use designation, which allows for light industrial uses, and the 12-kV distribution lines would be located within public ROWs along the Residential and Multiple Use community plan land use designations.

| Table B.1-1: Existing and Designated Land Uses | | | | |
|--|-------------------|---------------------------|---|----------------------------|
| Proposed Project Component | Existing Land Use | General Plan Designation | Zoning Designation | Community Plan Designation |
| Vine Substation | Parking Lot | Industrial Employment | IS-1-1 | Light Industrial |
| 12-kV Distribution Relocation | Public Street ROW | Residential, Multiple Use | MCCPD-CL-6, MCCPD-MR-1500, CC-4-5 | Residential, Commercial |
| 69-kV Loop-In | Public Street ROW | Industrial Employment | IS-1-1 | Light Industrial |

Source: SDG&E, 2014 (Table 4.10-1), 2015b (Table 3.10-1, 12-kV distribution relocation).

A small portion of the 12-kV distribution work for the Proposed Project is within the Coastal Zone. Such work is exempt from Coastal Development Permit requirements. Section 3060(f) of the California Public Resources Code provides that no Coastal Development Permit is required for the “installation, testing, and placement in service or the replacement of any necessary utility connection between an existing service facility and any development approved pursuant to the Coastal Act.” The California Coastal Commission has interpreted this exemption in a document entitled “Repair, Maintenance, and Utility Hook-up Exclusions from Permit Requirements” that was adopted on September 5, 1978. Section II.B.2.b of that document states “a coastal permit is not required to install, test, place in service, maintain, replace, modify or relocate underground facilities...provided that work is limited to public road or railroad rights-of-way or public utility easements.” The small portion of the distribution work that is in the Coastal Zone is limited to installation of new duct banks within public roads and under the railroad. Therefore, no Coastal Development Permit is necessary and the Proposed Project is exempt from California Coastal Commission review (SDG&E, 2015a).

B.1.8 Zoning

The Proposed Project is located within the City of San Diego and is subject to the City of San Diego General Plan, which provides a framework of policies, objectives, and land use designations to guide long-term development. The City of San Diego Municipal Code supports the General Plan and provides specific development regulations for lands within the individual zoning designations. The Proposed Project area is also subject to the Midway/Pacific Highway Corridor Community Plan, Downtown Community Plan, and Uptown Community Plan, which identify goals, objectives, and recommendations for the area and establishes a vision for the future form of the community. The Proposed Project area is located east of the San Diego International Airport within the Approach Overlay Zone, and is subject to the regulations, policies, and requirements contained within the San Diego International Airport’s applicable Airport Land Use Compatibility Plan (ALUCP). These plans, along with the existing uses, are described in relation to the Proposed Project in the following sections.

B.1.9 Project Overview

The Proposed Project is located in the southwestern portion of the City of San Diego, California. Specifically, the Proposed Project is approximately two miles northwest of downtown San Diego and directly adjacent to and east of the San Diego International Airport. The main components of the Proposed Project are provided below, with detailed descriptions of these components provided in Section B.1.10 (Project Components):

- Construct a new 69/12-kV Vine Substation at the southwestern corner of the intersection of Vine Street and Kettner Boulevard, just west of Interstate 5 (I-5).

- Relocate approximately nine existing 12-kV distribution circuits utilizing a combination of existing and new underground distribution conduits. The relocated distribution circuits would generally be placed within the franchise portion of City of San Diego public streets (public right-of-way [ROW]) in the Project area, including Columbia Street, India Street, Kettner Boulevard, Pacific Highway, Sassafras Street, State Street, Vine Street, West Laurel Street, West Hawthorn Street, West Palm Street, and West Redwood Street. An optional alignment for the 12-kV distribution line would utilize India Street between West Redwood Street and West Palm Street, and then West Palm Street to Columbia Street to avoid potential conflicts with a proposed sewer line planned for placement in Columbia Street between West Redwood Street and West Palm Street.
- Loop in an existing 69-kV power line (TL604) to the proposed Vine Substation, which includes removing two existing wood poles and one stub guy pole near the corner of California Street and Vine Street, replacing one existing distribution pole with a new tubular steel pole (TSP), and installing two new TSPs adjacent to the eastern lane of Pacific Highway.
- To connect the proposed Vine Substation and Kettner Substation to SDG&E's telecommunication system, additional fiber optic cable would be installed generally within the underground 12-kV distribution duct banks (approximately 2,850 feet), with an overhead connection (100 feet) into the proposed Vine Substation.

The location of the Proposed Project is depicted in Figure B.1-1 (Project Location Map), and the four major components are depicted in Figure B.1-2 (Project Overview Map). Detailed maps are provided in Figure B.1-3a-k (Detailed Project Components). All figures are provided at the end of Section B.1. A more detailed description of the area within and around the Proposed Project follows.

B.1.9.1 Project Objectives

SDG&E has identified the following objectives to meet the purpose and need described below:

- Maintain existing substation and distribution system reliability standards;
- Provide substation and circuit tie capacity that would provide additional reliability for existing and future system needs;
- Meet the area's long-term electric distribution capacity needs by constructing a substation near planned load growth; and
- Utilize existing SDG&E-owned land previously purchased for substation use to meet the scheduled in-service date of July 2017.

B.1.9.2 Project Need

SDG&E is a regulated public utility that provides electric service to approximately 1.4 million customers within an approximately 4,100-square-mile service area, covering 25 cities and unincorporated areas within San Diego County and a portion of Orange County. To better understand the need for the Project, a description of the existing distribution system in the Project area is provided.

Existing System

SDG&E currently operates four substations to provide electrical service to downtown and the surrounding area: Kettner Substation, Urban Substation, Station B Substation, and Sampson Substation. SDG&E also operates the Grant Hill Substation, which is located outside of the desired coverage area. Figure B.1-5 (Existing System Configuration) provides a schematic diagram of the existing distribution system in the Project area. As shown in Figure B.1-5, one existing tie-line (TL), TL604, connects the

Kettner Substation to the existing Old Town Substation. Six existing distribution lines, circuits (C) 135, C138, C139, C367, C457, and C458, currently connect to the Kettner Substation. The remaining three distribution lines (to be relocated), C102, C108, and C113, originate at the existing Station B Substation.

Increased commercial and residential growth in the downtown area is loading these existing substations to their maximum capacities. Recent load additions in downtown and the surrounding area include an expansion of San Diego International Airport and construction of Ballpark Village, as well as a new mixed-use development which is expected to commence construction at the end of 2015. Of particular concern is Kettner Substation, which is an aging facility with a variety of reliability concerns that provides service to the San Diego International Airport and the Point Loma Wastewater Treatment Plant. SDG&E has determined that the proposed Vine Substation is needed to offload the existing substations and to maintain its current reliability of service to existing and new customers in downtown and the surrounding areas (see Section B.1.9.3, Project Capacity, below).

Because the projected load indicates that the Station B and Urban Substations would exceed 100 percent of their capacity, and the Kettner and Sampson Substations would exceed 85 percent of their capacity in 2018, SDG&E has determined that an additional 30 megavolt-amperes (MVA) are needed by mid-2017 to address reliability concerns and serve the projected electric distribution load growth (SDG&E, 2015a). The optimum maximum substation load is 85 percent, as it allows for transformer bank loads to be transferred in the event of a transformer bank outage. Optimum operating conditions maintain substation reliability and reduce outage times. All of the substations—with the exception of the Grant Hill and Sampson Substations—are near capacity and would begin to exceed their 85-percent ratings in 2015 or sooner. The Grant Hill Substation has approximately 33 MVA of remaining capacity; however, SDG&E has identified that expansion of this facility would likely require substantial power line and distribution upgrades, and as noted above is located outside of the desired coverage area. Therefore, SDG&E has determined that the proposed Vine Substation is needed by mid-2017 to eliminate existing reliability concerns at the Kettner Substation and to provide additional capacity to help offload the existing congested substations in downtown and the surrounding area.

The prime driving factors in SDG&E's determination of the need to construct a new substation in the area are:

- The need to maintain reliable service to SDG&E commercial and residential customers in the San Diego downtown and surrounding area,
- The expected electrical load growth of 30 MVA by mid-2017, and
- The need to prevent extended outages and disruption of services to new and existing customers in the area.

SDG&E considers additional substation transformer capacity when the loss of a single transformer may cause an interruption to major commercial/industrial load that cannot be restored through use of 12-kV circuit ties to other substations. The downtown and surrounding area is approaching this threshold. Therefore, SDG&E is considering planning and design of the proposed Vine Substation to provide tie capacity in the event of a loss of a single transformer.

Each of the Proposed Project objectives, as noted in Section B.1.9.1 (Project Objectives), is more thoroughly described in the subsections that follow within the context of the need for the Project.

Maintain Existing Reliability Standards

The addition of the proposed Vine Substation would help to maintain reliability for existing distribution and substation systems within downtown and the surrounding area, including reliability concerns at the

Kettner Substation. The Kettner Substation is an aging substation that provides service to major customers that serve critical regional needs, including San Diego International Airport and the Point Loma Wastewater Treatment Plant. The Kettner Substation has a variety of reliability issues including its physical configuration and aging infrastructure. Construction of the proposed Vine Substation would allow the reliability concerns at the Kettner Substation to be addressed by adding operational flexibility and ultimately provide 90 MVA of additional capacity. The proposed Vine Substation would offload approximately 30 MVA from the Station B Substation and 40 MVA from the Kettner Substation, bringing them within the optimum loading standards. (See Section B.1.9.3, Project Capacity, discussion below)

Improve Substation and Circuit Reliability

Installation of the proposed Vine Substation would allow for new circuits to serve downtown and the surrounding area, and provide increased circuit and substation reliability by freeing up capacity at the existing substations. The proposed Vine Substation would add substation capacity enabling the Station B Substation to be off-loaded, and provide additional new transformer banks and circuits, thus increasing the number of circuit ties available to transfer load in the event of a circuit or substation component outage (SDG&E, 2015a). The reliability and flexibility of the local electrical grid improves with balanced circuit loading and an increased number of circuits to transfer load in the event of a circuit or branch outage.

Meet Area Electrical Capacity Needs

The downtown San Diego area is fed primarily from the Kettner Substation, Urban Substation, Station B, and Sampson Substation. These four substations would exceed their maximum capacity by 2018. The proposed Vine Substation would have an initial capacity of 90 MVA; however, a single 30 MVA transformer bank would be transferred from Kettner Substation to Vine Substation such that the realized increase in capacity of the distribution system would be 60 MVA. The ultimate Vine Substation design includes an additional 30 MVA transformer bank, which would increase the capacity of the Vine Substation to 120 MVA, resulting in a total system increase in capacity of 90 MVA. This would allow SDG&E to accommodate future load growth beyond that of existing forecasts (SDG&E, 2015a). See Section B.1.9.3 (Project Capacity) for further information on capacity-related issues.

Meet Scheduled In-service Date

The Vine Substation is proposed to be located on an approximately 1.5-acre parcel currently owned by SDG&E within the Midway/Pacific Highway Corridor Community Plan area. The property was purchased in 1976 in anticipation of constructing the Laurel Street Substation. The Laurel Street Substation was never constructed and in 1988, it was leased as a parking lot. Because the site is already owned by SDG&E, no time is required to acquire the property. Because the property is already owned by SDG&E and the current use of the site as a parking lot is being relocated, no difficulties in meeting the scheduled in-service date are anticipated.

B.1.9.3 Project Capacity

The power line component of the Proposed Project involves looping in the existing TL604 line, which comes from the Old Town Substation, to the proposed Vine Substation forming a new tie-line (TL6976) between Vine Substation and Kettner Substation, as shown in Figure B.1-6 (Proposed System Configuration). The 69-kV loop-in serves as the incoming electrical source to the Vine Substation from the larger electrical grid. The existing TL604 line is rated at 193 MVA and is adequate to handle the

ultimate configuration of the proposed Vine Substation (see Section B.1.10.1). Therefore, no additional reinforcement of the 69-kV system is anticipated at this time (SDG&E, 2015a).

The distribution portion of the Proposed Project involves relocating nine existing 12-kV distribution circuits from either Kettner Substation or Station B Substation (approximately 30 MVA of load) to the proposed Vine Substation, as shown in Figure B.1-6 (Proposed System Configuration). As a result of the relocation, the nine existing circuits would be renamed and split into 11 new circuits (C139 and C108 would each be split into two new circuits). See Table B.1-2 (Distribution Relocation Summary) in Section B.1.10.2, below.

The Project would be constructed in phases to accommodate the additional capacity needed. Under the initial configuration, two new 30-MVA transformer banks would be installed at Vine Substation and one existing 30-MVA transformer bank would be relocated from Kettner Substation to Vine Substation (SDG&E, 2015a). Therefore, the initial capacity of Vine Substation would be 90 MVA; however, the realized increase in capacity to the distribution system would be 60 MVA. To accommodate future load growth beyond that of existing forecasts, the ultimate configuration of the Vine Substation includes installation of a fourth 30-MVA transformer, which would result in a total substation capacity of 120 MVA (90 MVA increase in the distribution system) (SDG&E, 2015a).

B.1.10 Project Components

B.1.10.1 Proposed Vine 69/12-kV Substation

The proposed Vine Substation would measure approximately 305 feet by 180 feet, requiring approximately 1.3 acres of a 1.5-acre parcel located on the southwest corner of Kettner Boulevard and Vine Street. The proposed substation site is detailed in Figure B.1-2 (Project Overview Map) and Figure B.1-3a (Detailed Project Components). The existing concrete-lined channel located on the substation property would be located outside the Proposed Project footprint; it would not be altered (realigned or modified) as part of the Proposed Project (SDG&E, 2015a).

Build-out of the Vine Substation would occur in two phases, initial and ultimate build-out. As depicted in Figure B.1-7 (Vine Substation Initial Arrangement), the initial build-out of the proposed substation to provide 90 MVA of capacity would include the following major equipment:

- Two 69-kV tie-line terminations
- Six 69-kV gas circuit breakers
- Three 69-kV potential transformers
- Three 69/12-kV standard profile, low-sound 30 MVA transformers
- Three ¼ sections of switch gear to accommodate twelve 12-kV circuits
- Three 12-kV metal-enclosed capacitor banks
- One 12-kV metal-enclosed reactor bank
- One approximately 30-foot-tall standard steel rack consisting of a 69-kV bus
- One approximately 20-foot-wide by 40-foot-long by 11-foot-tall masonry block control shelter

Ultimately, the substation is planned to be a 120-MVA, 69/12-kV distribution substation. As depicted in Figure B.1-8 (Vine Substation Ultimate Arrangement), the substation would include the following major equipment (includes the initial equipment noted above):

- Four 69-kV tie-line terminations

- Nine 69-kV gas circuit breakers
- Three 69-kV potential transformers
- Four 69/12-kV standard profile, low-sound 30 MVA transformers
- Four ¼ sections of switch gear to accommodate sixteen 12-kV circuits
- Four 12-kV metal-enclosed capacitor banks
- Two 12-kV metal-enclosed reactor banks
- One approximately 30-foot-tall standard steel rack consisting of a 69-kV bus
- One approximately 20-foot-wide by 40-foot-long by 11-foot-tall masonry block control shelter

Figure B.1-9 (Vine Substation Profile View) provides two profile views of the proposed substation.

The steel structures within the substation would be comprised of galvanized steel, while the transformers, breakers, switchgear, and capacitors would be painted ANSI 70 Grey. The control shelter would be constructed from “La Paz” brown masonry blocks, and would include a welded metal roof. Oil spill containment basins would be installed around the transformers to capture any oil accidentally leaked from these components. The basins would be designed to have a capacity that exceeds the transformer capacity by 10 percent. Under the ultimate build-out arrangement, the four transformers would contain approximately 24,100 gallons of oil (varies slightly by manufacturer). As described above, the proposed Vine Substation would be equipped with nine 69-kV circuit breakers under the ultimate configuration. Each circuit breaker would contain approximately 33 pounds of sulfur hexafluoride (SF₆). SF₆ is used in the electrical industry as a gaseous dielectric medium for high-voltage equipment such as circuit breakers or switchgear. The main purpose of the gas is to prevent or rapidly stop electrical discharges. Therefore, approximately 297 pounds of SF₆ would be used at the proposed Vine Substation under the ultimate configuration (SDG&E, 2015a).

Substation Lighting

Substation lighting would be provided by a mixture of high-pressure sodium and metal halide lights that would be installed to adhere to the following SDG&E standards:

- Provide enough light for a safe entry and exit from the substation;
- Allow for safe driving around busses/racks, corners, and roadways; and
- Allow for a preliminary visual inspection of the substation.

With the exception of the gate entry lights, which would remain on at night for safety purposes, the remaining substation lighting would not be turned on unless it is required for nighttime work and/or an emergency. One light would be installed at the main gate, one light would be installed on each side of the control shelter, and a minimum of two lights would be installed on each substation wall. Lights may also be installed on the end of the steel rack, if required. All on-site lighting would be oriented downward to minimize glare onto the surrounding property.

Substation Access

The primary access would be from Vine Street and would require relocation of the existing driveway approximately 50 feet southwest. An existing driveway from Kettner Boulevard would also be relocated, approximately 125 feet southeast, and would provide secondary access to the site. The two gates would

be locked and monitored remotely to limit access to only authorized personnel. Warning signs would be posted on the substation wall and gates in accordance with federal, State, and local safety regulations.

The access road within the proposed Vine Substation would be asphalt-paved with an approximate width of 30 feet. The road would connect the primary and secondary access to the control shelter, located in the southern corner of the proposed Vine Substation. This interior road would be approximately 425 feet long, occupying approximately 0.3 acre (see Figures B.1-7 and B.1-8).

Substation Perimeter

An approximately 10-foot-tall, “La Paz” brown colored masonry wall would enclose the entire substation. Two approximately 10-foot-tall and 30-foot-wide sliding gates would be installed within the perimeter wall to provide primary and secondary access to the substation. The gates would be constructed from chain-link material and would be designed to accommodate standard brown slats. Five strands of barbed wire would be installed horizontally along the interior of the wall and gates so as to not be visible from the exterior of the substation. Following construction of the proposed Vine Substation wall, landscaping and irrigation would be installed. Landscaping around the proposed Vine Substation property would be designed to filter views for the surrounding community and other potential sensitive receptors, consistent with SDG&E’s Landscape Plan. The conceptual landscape plan calls for informal clusters of small and medium height shrubs outside the perimeter wall along Vine Street and Kettner Boulevard (SDG&E, 2014). Water supply for the irrigation would be provided by a permitted municipal service connection to a water supply system that can provide an adequate supply to the site.

B.1.10.2 12-kV Distribution Relocation

As indicated in Table B.1-2 (Distribution Relocation Summary), approximately nine existing distribution circuits would be intercepted and relocated to the proposed Vine Substation. As part of the relocation process, some of the circuits would be renumbered, as noted in Table B.1-2 and depicted in Figures B.1-5 and B.1-6.

| Table B.1-2: Distribution Relocation Summary | | |
|---|--|---|
| Existing Distribution Circuit Number | Approximate Interception Point | Proposed Distribution Circuit Number |
| 135 | Kettner Boulevard and Sassafras Street | 135 |
| 138 | State Street and Maple Street | 138 |
| 139 | Sassafras Street and India Street | 1479 |
| | West Laurel Street and State Street | 139 |
| 367 | Adjacent to Kettner Substation | 367 |
| 457 | West Laurel Street and Pacific Highway | 457 |
| 458 | Adjacent to the proposed Vine Substation | 458 |
| 108 | Kettner Boulevard and Ivy Street | 1481A |
| | Pacific Highway and West Hawthorn Street | 1481B |
| 113 | Reynard Way and West Maple Street | 1482 |
| 102 | Kettner Boulevard and West Hawthorn Street | 1483 |

Source: SDG&E, 2014 (Table 3-1), 2015b (Table 2-1, 12-kV distribution relocation).

The relocated distribution circuits would generally travel within public ROW along the following streets:

- Kettner Boulevard between Vine Street and West Hawthorn Street;
- Vine Street between California Street and India Street;
- India Street between Vine Street and West Redwood Street or India Street between Vine Street and West Palm Street (optional alignment to avoid conflicts with a proposed sewer line);
- West Redwood Street (original alignment) or West Palm Street (optional alignment) between India Street and Columbia Street;
- Columbia Street between West Redwood Street (original alignment) or West Palm Street (optional alignment) and State Street;
- West Laurel Street between Kettner Boulevard and State Street; and
- State Street between West Laurel Street and Maple Street.

The distribution circuits would primarily be located within the franchise position of City of San Diego public streets; no additional ROW would be acquired. The distribution route would cross the MTS railroad at West Palm Street just west of Kettner Substation, which requires a Right-of-Entry Permit (see Section B.1.14, Permits and Approvals). Jack-and-bore construction would occur in this location, therefore it is not anticipated that railroad closure would be necessary (SDG&E, 2015a).

The relocation process would utilize a combination of existing and new underground distribution conduit, as depicted in Figure B.1-2 (Project Overview Map) and in Figure B.1-3a-k (Detailed Project Components). A total of approximately 9,720 feet of new duct bank would be installed to relocate the 12-kV distribution circuits. Up to an additional 500 feet of new duct bank would be installed to facilitate connecting the new duct banks with existing underground conduit and aboveground facilities (SDG&E, 2015a).

In addition to the new underground duct banks, approximately 10,000 feet of existing duct bank would be utilized to relocate the 12-kV distribution circuits. These existing facilities are located within the following roadways:

- Pacific Highway, between West Palm Street and West Laurel Street;
- Pacific Highway, between West Laurel Street and West Hawthorn Street;
- Kettner Boulevard, between West Palm Street and West Hawthorn Street;
- West Laurel Street, between Kettner Boulevard and State Street; and
- State Street, between West Laurel Street and West Maple Street.

Underground Duct Banks and Vaults

As described previously, approximately 10,220 feet (9,720 feet + 500 feet) of new underground duct banks would be installed to facilitate relocating the 12-kV distribution circuits from existing substations to the proposed Vine Substation. Each underground duct bank would be comprised of eight five-inch diameter polyvinyl chloride (PVC) conduits encased in concrete. In locations where a telecommunications cable would be collocated with the distribution cables, an additional pair of four-inch diameter PVC conduits would also be placed in the duct bank. The finished duct bank would be approximately 32 inches tall and 18 inches wide. A typical drawing of the proposed underground duct bank is provided in Figure B.1-10 (Typical 12-kV Underground Duct Bank).

In addition to the underground duct banks, approximately 16 new underground vaults would be installed to facilitate pulling and splicing of conduit during the installation process, as well as to facilitate inspections, maintenance, and repairs during operation. The proposed locations of these facilities are depicted in Figure B.1-3a-k (Detailed Project Components). The design would utilize three sizes of pre-cast concrete vaults, as summarized in Table B.1-3 (Vault Dimensions).

| Table B.1-3: Vault Dimensions | | | | | | | |
|--------------------------------------|----------------------|-------------------|-------|-------|--|-------|-------|
| Vault Type | Approximate Quantity | Dimensions (Feet) | | | Approximate Excavation Dimensions (feet) | | |
| | | Length | Width | Depth | Length | Width | Depth |
| 3325 | 10 | 15 | 9 | 10.5 | 17 | 10 | 13.7 |
| 3326 | 4 | 21 | 9 | 10.5 | 23 | 10 | 13.7 |
| 3327 | 2 | 26 | 12 | 10 | 28 | 14 | 12.6 |

Source: SDG&E, 2015b (Table 2-2 12-kV Distribution Relocation)

Distribution Switches and Capacitors

Approximately eight above ground distribution switches and one aboveground capacitor would be installed along the underground duct bank routes to facilitate the relocation of the distribution circuits. Five of the proposed aboveground switches would be located adjacent to the proposed Vine Substation on the sidewalk where no additional trenching is required. The remaining three would be installed at the following locations:

- On the south side of West Laurel Street near the intersection with State Street.
- On Pacific Highway, approximately 400 feet north of the intersection with West Laurel Street.
- On Harbor Drive near a new parking facility designed to serve the San Diego International Airport.

In addition to the switches, one above ground capacitor will be installed at the southwest corner of West Juniper Street and Kettner Boulevard (SDG&E, 2015a). Each distribution switch would be installed on a concrete pad measuring approximately 70 inches long by 44 inches wide by 32 inches tall. The switches would be contained within a steel enclosure mounted atop the pad that would measure approximately 67 inches long by 41 inches wide by 50 inches tall. The single capacitor would be installed on a concrete pad, similar in size to those for the switches, and would measure approximately 60 inches long by 44 inches wide, by 60 inches tall. Typical drawings of the concrete pad, switch, and capacitor are provided in Figure B.1-12 (Typical Switch and Capacitor Pad), Figure B.1-13 (Typical 12-kV Switch), and Figure B.1-14 (Typical 12-kV Capacitor). The proposed locations of these facilities are depicted in Figure B.1-3a-k (Detailed Project Components).

Underground Cable

All underground distribution circuits would utilize 1,000-kcmil aluminum cross-linked polyethylene insulation (XLPE) cables. The distribution getaways, located between the proposed Vine Substation and the two adjacent underground vaults located in Kettner Boulevard, would contain 1,000-kcmil copper XLPE cables.

B.1.10.3 69-kV Loop-in

The power line component of the Proposed Project would consist of looping in an existing 69-kV tie-line, TL604, to the proposed Vine Substation. The existing overhead power line is located adjacent to and west of the proposed substation site. TL604 travels generally south from the Old Town Substation by spanning

existing railroad tracks and Witherby Street, then traveling southeast along Kurtz Street. The line then spans Noell Street and continues parallel to and adjacent to the south side of the existing railroad tracks. Near the intersection of California Street and Vine Street, the line spans the railroad tracks, reaching the existing wood pole at the intersection of California Street and Vine Street. The line then spans the railroad tracks again and travels southeast parallel to the railroad tracks. After spanning West Palm Street, the line turns northeast, travels along West Palm Street, and terminates at the Kettner Substation.

Poles

SDG&E is proposing to loop the existing double-circuit TL604 into the proposed Vine Substation. This would require the removal of two approximately 70-foot-tall, directly buried, dead-end wood poles; the removal of one approximately 28-foot-tall, self-supported stub guy pole; and the installation two new, approximately 100-foot-tall, self-supported, dead-end TSPs (see Figure B.1-3a). These new poles range in diameter from five to seven feet at the base and two to three feet at the top. New 69-kV overhead conductor would be used to connect these new poles to the existing power line and the proposed substation, creating the loop-in. The new TSPs would be equipped with six dead-end insulators to carry the three bundled conductors from the existing steel poles to the proposed Vine Substation. One existing wood distribution pole would also be replaced by a new approximately 100-foot-tall self-supported TSP, for a total of three new TSPs. All pole designs would comply with the requirements of G.O. 95, and meet or exceed the designated safety factors (SDG&E, 2015a). The new power line poles would be installed within the franchise position along Pacific Highway. SDG&E would obtain a License Agreement from MTS for the approximately 80 feet of new, approximately 320-foot-wide ROW for the overhead conductors. The remainder of the 69-kV loop-in would be installed within the franchise position of City of San Diego public streets.

All towers and poles would be built and replaced in accordance with Avian Power Line Interaction Committee guidelines. This is achieved by either getting 60 inches of separation between phases or by using avian protection/cover-ups (SDG&E, 2015a). Typical drawings of the existing wood pole, stub guy pole, and new TSPs are provided in Figure B.1-15 (Typical Existing 69-kV Wood Pole), Figure B.1-16 (Typical Existing Stub Guy Pole), and Figure B.1-17 (Typical Proposed 69-kV Tubular Steel Pole).

Overhead Conductor

TL604 is currently configured as a bifurcated-circuit (two conductors per phase) power line, where six individual conductors are supported by the associated poles. To facilitate the loop-in of this power line, these six conductors would travel from the existing and replacement steel poles to the new TSPs. From each new TSP, six conductors would traverse the railroad tracks and terminate within the Vine Substation (SDG&E, 2015a). TL604 currently utilizes 1,033-kcmil aluminum-clad steel reinforced (ACSR) conductor, and the new loop-in would also use 1,033-kcmil ACSR. The overhead span lengths between poles would vary, but would generally be between 100 and 300 feet. The distance from the ground to the lowest conductor would be at least 35 feet, and the conductors' vertical spacing would be approximately nine feet. As described in Section B.1.10.4 (Telecommunication System Extension), fiber optic telecommunication cables would also be collocated on the 69-kV loop-in poles.

B.1.10.4 Telecommunication System Extension

Once operational, the Vine Substation would be unmanned. SDG&E's substations typically utilize a telecommunication system composed of SDG&E fiber optic cable and an AT&T telephone line to facilitate off-site monitoring and operation. In order to connect the proposed Vine Substation and Kettner Substation to this system, additional fiber optic cable would be installed as part of the Proposed Project.

In order to bring fiber communication from the proposed Vine Substation to Kettner Substation, approximately 2,850 feet of new underground fiber optic cable would be installed within the previously described underground 12-kV distribution duct banks (see discussion below). The proposed Vine Substation would be connected to the existing telecommunication network by adding approximately 100 feet of fiber optic cable from an existing underground handhole located within Pacific Highway to one of the new 69-kV TSPs that would be installed as part of the 69-kV loop-in. The fiber optic cable would then travel overhead, across the existing railroad tracks, to the proposed Vine Substation within the power line's ROW. The proposed connection between the existing underground vault located in Pacific highway and the new 69-kV TSP would be located within new underground conduit. Once at the new 69-kV TSP, the telecommunications line would transition from an underground to overhead configuration. The telecommunications line would then travel overhead from the 69-kV TSP to the proposed Vine Substation (SDG&E, 2015a).

The AT&T phone line would be upgraded and relocated from a current system feeding the existing customer at the site. As depicted in Figure B.1-3a (Detailed Project Components), one of three potential interconnection points located adjacent to the proposed Vine Substation would be used to facilitate the connection.

Underground Duct Bank

As part of the 12-kV distribution relocation (discussed above in Section B.1.10.2), approximately 2,850 feet of new underground duct banks would be installed along Kettner Boulevard between the proposed Vine Substation and Kettner Substation. Approximately 100 additional feet of new underground duct bank would be installed between an existing handhole located within Pacific Highway and one of the new TSPs that would be installed as part of the 69-kV loop-in. These underground duct banks would include two additional four-inch diameter PVC conduits as depicted in Figure B.1-10 (Typical 12-kV Underground Duct Bank). In locations where this duct bank would enter 12-kV underground vaults, a separate underground duct bank, comprised of two four-inch-diameter PVC conduits encased in a slurry mixture, would be used to route the telecommunication cable separate from the distribution vaults. This separate underground telecommunication duct bank would be approximately 3 feet tall and 1.5 feet wide. A typical drawing of the proposed underground duct bank is provided in Figure B.1-18 (Typical Telecommunication Underground Duct Bank). In addition to the underground duct banks, approximately four underground handholes would be installed to facilitate pulling and splicing during construction and inspection, maintenance, and repair during operation. These precast concrete handholes measure approximately 44 inches long, 32 inches wide, and 24 inches deep. A typical drawing of the proposed telecommunication handhole is provided in Figure B.1-19 (Typical Telecommunication Underground Handhole). The proposed locations of these facilities are depicted in Figure B.1-3a-k (Detailed Project Components).

Underground and Overhead Cable

The telecommunication system extension would utilize all dielectric self-supporting-48 fiber optic cable that measures approximately 0.685 inch in diameter.

B.1.11 Project Construction

Proposed Project construction would include activities associated with the following:

- Land surveying,
- Development of access,

- Substation construction,
- Replacement of existing poles,
- Installation of new subtransmission poles,
- Installation of new duct banks and vaults
- Underground distribution installation,
- Telecommunications installation, and
- Overhead distribution installation.

SDG&E anticipates that Proposed Project construction would take approximately 17 months. Construction would commence following CPUC approval, final engineering, and procurement activities. In order to meet the July 2017 operating date, construction is anticipated to start in March 2016 and would last through July 2017, including testing, commissioning, and energization (see “Construction Schedule” below for additional details). The following subsections describe the construction activities associated with the Proposed Project.

B.1.11.1 All Components

Construction methods for the proposed Vine Substation, 12-kV distribution relocation, and 69-kV loop-in are described in this section. The methods used to extend the telecommunication system are similar to those that would be used to relocate the 12-kV distribution circuits. As a result they are not discussed further.

Dust Control

There are two construction areas that would be unpaved and may require watering during construction to control fugitive dust. The first would be the approximately 1.5-acre (340-foot by 190-foot) proposed Vine Substation site. This location would transition from paved to unpaved during the site development process with the current surface first being removed, then grading the site to engineering specifications, followed by covering the site with an approximately 12-inch layer of Class II aggregate base (SDG&E, 2014). The second would be the transmission work area located adjacent to Pacific Highway. This work area would be used during the installation process for the two new 69-kV TSPs located adjacent to the proposed Vine Substation. Portions of this site (approximately 250 feet by 15 feet) are currently unpaved (SDG&E, 2015a). All unpaved construction areas would be watered up to two times daily during construction to reduce fugitive dust emissions and to meet San Diego Air Pollution Control District (SDAPCD) Rule 55 requirements. SDG&E or its contractor would keep the construction area sufficiently dampened to control dust caused by construction and hauling, and would provide at all times reasonable dust control of areas subject to windblown erosion. The Proposed Project would use potable water for fugitive dust control during construction and landscaping. The water would be obtained from the City of San Diego (SDG&E, 2015a).

Traffic Control

SDG&E would prepare and implement traffic control plans to address potential disruption of traffic circulation during construction activities and address any safety issues. These traffic control plans would be prepared by the project engineer or contractor and subject to approval by the appropriate jurisdictional agency, such as the City of San Diego.

Storm Water Pollution Prevention Plan

SDG&E would be required to obtain a Construction General Permit-2009-0009-DWQ (2009 CGP) from the State Water Resources Control Board (SWRCB) as the Proposed Project construction would disturb a surface area greater than one acre. To obtain coverage under the Construction General Permit, Permit Registration Documents, including a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), risk assessment, site map, certification, and annual fee must be submitted electronically to the SWRCB. A Waste Discharger Identification number must be assigned to the Project prior to initiating construction activities. The SWPPP would include the following:

- Identification of pollutant sources and non-storm water discharges associated with construction activity
- Specifications for Best Management Practices (BMPs) that would be implemented, inspected, and maintained during Proposed Project construction to minimize erosion, the potential for accidental releases, and pollutants in the runoff from the construction areas (including pollutants from storage and maintenance areas, as well as laydown areas for building materials)
- Specifications for spill response and implementation
- A record of training provided to persons responsible for implementing the SWPPP
- Reporting and record-keeping requirements.

Access to the Substation Location

Primary access to the proposed Vine Substation would be from Vine Street during construction via the relocated driveway. Access to the 69-kV loop-in would primarily occur from Vine Street, California Street, and Pacific Highway. The 12-kV distribution relocation activities would primarily be accessed from Kettner Boulevard and Vine, India, Sassafras, West Redwood (original alignment) or West Palm (optional alignment), Columbia, West Laurel, and State Streets. As described previously, secondary access to the proposed Vine Substation would be from Kettner Boulevard for use during operation and maintenance activities. No new permanent access roads would be constructed.

Temporary Staging Yards

The majority of construction equipment, vehicles, personnel, and material staging areas would be accommodated within the proposed Vine Substation property and within the work areas described below. Equipment staging would also be conducted at existing SDG&E facilities. Existing SDG&E facilities have been detailed in Table B.1-4 (Existing SDG&E Staging Facilities) below. No additional improvements at these sites would be required prior to construction. Additional existing SDG&E facilities or disturbed areas may be identified for use following the completion of final engineering. Temporary parking of some vehicles along Vine Street may be required depending on actual construction activities occurring at the proposed Vine Substation.

| Table B.1-4: Existing SDG&E Staging Facilities | | |
|---|---|---------------------------------|
| Staging Facility | Approximate location | Approximate Size (Acres) |
| Kearny Construction and Maintenance Staging Area | Overland Avenue and Clairemont Mesa Boulevard | 11.4 |
| Metro Staging Yard | Sunrise Street and 33rd Street | 11.6 |
| Beach Cities Staging Yard | Santa Fe Street and Damon Avenue | 9.2 |
| Clairemont Drive Staging Yard | Clairemont Drive and Denver Street | 1.1 |

Source: SDG&E, 2015b (Attachment G).

Work Areas

In addition to the temporary staging yards discussed above, temporary work areas would be required for each Proposed Project component in order to facilitate construction. The anticipated workspace requirements are described in detail in the following subsections, and are summarized in Table B.1-5 (Temporary Workspace Requirements), and are depicted in Figure B.1-3a-k (Detailed Project Components). Temporary work areas would all be accessed by construction equipment using existing access roads (SDG&E, 2015a). All work areas would be restored to pre-construction conditions to the extent practicable following the completion of construction. Further discussion of the restoration process is provided in Section B.3.4 (Biological Resources). Because the new telecommunication system facilities would be installed adjacent to the proposed distribution circuits or would be collocated with the overhead 69-kV loop-in, minimal additional workspace would be required.

| Table B.1-5: Temporary Workspace Requirements | | | | | | | | |
|---|----------------------------------|--|----------|-------------------------------|----------------------------|---------------------|--------------|--------------|
| Proposed Project Component | Workspace Type | Required Improvements | Quantity | Approximate Dimensions (Feet) | Total Approx. Area (Acres) | Vegetation Type | Temp. Impact | Perm. Impact |
| Proposed Vine Substation | Substation Pad Installation Area | Grading, excavation, boundary wall and gate installation, substation component installation, and driveway installation | 1 | 340 x 190 | 1.48 | Disturbed/Developed | 0.00 | 1.48 |
| 12-kV Distribution Relocation | Underground Work Area | Excavation, duct bank installation, and cable installation | 1 | 10,220 x 30 | 7.04 | Disturbed/Developed | 7.04 | 0.00 |
| | Vault Installation Work Area | Excavation, vault installation, and cable installation | 16 | 60 x 40 each | 0.88 | Disturbed/Developed | 0.88 | 0.00 |
| | Pull Site | None | 56 | 50 x 30 each | 1.93 | Disturbed/Developed | 1.93 | 0.00 |
| | Jack-and-bore work area | Excavation | 2 | 100 x 25 | 0.06 | Disturbed/Developed | 0.06 | 0.00 |
| | | | | 20 x 16 | 0.01 | Disturbed/Developed | 0.01 | 0.00 |
| | | None | 1 | 100 x 55 | 0.13 | Disturbed/Developed | 0.13 | 0.00 |
| 69-kV Loop-In | Work Area | Excavation and pole and foundation installation (WA 5) | 1 | 250 x 55 | 0.28 | Disturbed/Developed | 0.28 | <0.01 |
| | | Pole and Foundation Removal (WA 3) | 1 | 140 x 50 | 0.16 | Disturbed/Developed | 0.16 | 0.00 |
| | | Pole Removal (WA 2) | 1 | 100 x 50 | 0.11 | Disturbed/Developed | 0.11 | 0.00 |

| Table B.1-5: Temporary Workspace Requirements | | | | | | | | |
|---|---------------------------------|--|----------|-------------------------------|----------------------------|---------------------|--------------|--------------|
| Proposed Project Component | Workspace Type | Required Improvements | Quantity | Approximate Dimensions (Feet) | Total Approx. Area (Acres) | Vegetation Type | Temp. Impact | Perm. Impact |
| | | Pole Removal and Installation (WA 4) | 1 | 85 x 50 | 0.15 | Disturbed/Developed | 0.15 | <0.01 |
| | | Conductor Installation and Removal (WA 1) | 1 | 80 x 40 | 0.07 | Disturbed/Developed | 0.07 | 0.00 |
| | | Conductor Installation and Removal (WA 6) | 1 | 75 x 40 | 0.07 | Disturbed/Developed | 0.06 | 0.00 |
| Telecommunications System Extension | Underground Work Area | Excavation, duct bank installation, and cable installation | 1 | 625 x 30 | 0.43 | Disturbed/Developed | 0.43 | 0.00 |
| | Handhole Installation Work Area | Excavation, handhole installation, and cable installation | 4 | 50 x 30 each | 0.14 | Disturbed/Developed | 0.14 | 0.00 |
| Total | -- | -- | -- | -- | 13.11 | -- | 11.76 | 1.49 |

Source: SDG&E, 2015a (Attachment B).

Note: The temporary workspaces provided are approximate and subject to change pending final engineering. Some of the workspaces indicated would overlap. These overlapping areas have not been removed from the above calculations. The vault installation and switch/capacitor installation work areas would also serve as pull sites.

Construction Equipment and Personnel

Construction equipment would include bulldozers, excavators, loaders, graders, and trucks for excavating, compacting, and hauling. All exported soil and new fill would be transported using street-legal dump/loader trucks. Concrete trucks, backhoes, ditch-witches, and skid steers would be used for the foundation and below-grade work. Portable cranes and heavy hauling trucks would be employed to bring in the 69/12-kV transformers. Substation crews, assist vehicles, forklifts, man lifts, and boom trucks would be used to construct the substation, along with pickup trucks and vans for the wiring and control testing of the substation equipment. Overhead and underground line trucks, assist vehicles, and cable dolly trailers would be used for the construction of the power line and distribution circuits. Table B.1-6 (Construction Equipment Requirements) provides the anticipated construction equipment that would be used for each construction activity.

It is anticipated that up to 33 workers would be employed for the site development phase of the Proposed Project. Between 12 and 24 workers are expected during the foundation and below-grade work, as well as the construction of the proposed substation. The relocation of the 12-kV distribution circuits would require between 12 and 63 workers depending on the activity and locations. Final testing and checkout would require nine electricians and/or engineers. SDG&E would employ an average of 46 workers throughout the 19-month construction period, with a peak of up to 83 workers (SDG&E, 2015b). The workers would consist of existing SDG&E employees and contract workers. SDG&E does not anticipate any of the workforce needed to construct the Proposed Project would come from outside of San Diego County (SDG&E, 2015a). A summary of the anticipated construction personnel by Proposed Project component is provided in Table B.1-7 (Construction Personnel Requirements).

| Table B.1-6: Construction Equipment Requirements | | | |
|--|--|---|-------------------|
| Vehicle/Equipment Type | Use | Hours Operating at Site/Day (per vehicle) | Quantity Required |
| Proposed Vine 69/12-kV Substation | | | |
| <i>Site Development and Grading</i> | | | |
| Off-road Water Truck | Suppress dust | 7 | 1 |
| Backhoe | Excavate and load material | 6 | 2 |
| Compactor | Compact soil | 7 | 2 |
| Dozer | Grade pads and access roads | 6 | 2 |
| Excavator | Excavate and load material | 6 | 1 |
| Loader | Load dump trucks and stockpile material | 6 | 2 |
| Paver | Pave access roads | 6 | 1 |
| Roller | Compact soil | 6 | 2 |
| Scraper | Grade pads and access roads | 7 | 2 |
| Skid-steer Loader | Move material | 3 | 2 |
| Trencher | Excavate trenches | 6 | 1 |
| <i>Retaining/Boundary Wall Construction</i> | | | |
| Compactor | Compact soil | 9 | 1 |
| Excavator | Excavate and load material | 9 | 1 |
| Loader | Load dump trucks and stockpile materials | 9 | 3 |
| Motor Grader | Grade pads and access roads | 9 | 1 |
| Walk-behind Compactor | Compact soil | 9 | 3 |
| <i>Below-Grade Construction</i> | | | |
| Backhoe | Excavate and load material | 6 | 1 |
| Loader | Move bulk material | 6 | 2 |
| Skid-steer Loader | Move rebar, equipment, masonry, and other material | 4 | 1 |
| Trencher | Excavate trenches | 6 | 1 |
| <i>Substation Equipment Installation</i> | | | |
| Cable Dolly (Trailer) | Transport reels of conductor | No Engine | 1 |
| Boom Truck | Place materials and set steel | 6 | 2 |
| Manlift | Set steel and install equipment | 6 | 1 |
| Bucket Truck | Set steel and install equipment | 5 | 4 |
| Oil Rig (Trailer with Generator) | Process transformer oil | 24 (10 days for manufacturer setup) | 1 |
| Stringing Rig (Trailer) | Assist with conductor installation | No Engine | 2 |
| 12-kV Distribution Relocation | | | |
| <i>Duct Bank Construction and Vault Installation – Daytime</i> | | | |
| Air Compressor | Power tools | 3 | 4 |
| Asphalt Spreader | Spread asphalt | 6 | 2 |
| Backhoe | Excavate and load material | 6 | 2 |
| Emulsion Trailer | Assist with repaving | 5 | 2 |
| Generator | Power tools and equipment | 5 | 2 |
| Grinding Machine | Prepare surface for repaving | 5 | 2 |
| Large Crane | Set vaults | 4 | 2 |
| Roller | Compact pavement | 5 | 2 |
| Saw-cutting Machine | Cut pavement | 6 | 2 |
| Skid-steer Loader | Excavate, move, and load materials | 2 | 2 |
| Small Backhoe | Excavate and load materials | 2 | 2 |
| Trackhoe | Excavate and load materials | 6 | 2 |
| Vacuum | Clean construction site | 6 | 2 |
| <i>Duct Bank Construction and Vault Installation – Nighttime</i> | | | |
| Air Compressor | Power tools | 3 | 4 |
| Asphalt Spreader | Spread asphalt | 6 | 2 |
| Backhoe | Excavate and load material | 6 | 2 |
| Emulsion Trailer | Assist with repaving | 5 | 2 |

| Table B.1-6: Construction Equipment Requirements | | | |
|---|---|---|-------------------|
| Vehicle/Equipment Type | Use | Hours Operating at Site/Day (per vehicle) | Quantity Required |
| Generator | Power tools and equipment | 5 | 2 |
| Grinding Machine | Prepare surface for repaving | 5 | 2 |
| Large Crane | Set vaults | 4 | 2 |
| Light tower with generator | Light construction areas | 8 | 8 |
| Roller | Compact pavement | 5 | 2 |
| Saw-cutting Machine | Cut pavement | 6 | 2 |
| Skid-steer Loader | Excavate, move, and load materials | 2 | 2 |
| Small Backhoe | Excavate and load materials | 2 | 2 |
| Trackhoe | Excavate and load materials | 6 | 2 |
| Vacuum | Clean construction site | 6 | 2 |
| <i>Cable Installation and Cutover</i> | | | |
| Pulling Rig | Pull cable into position | 2 | 1 |
| <i>Jack-and-Bore Installation</i> | | | |
| Air Compressor | Power tools | 3 | 1 |
| Backhoe | Excavate bore pits and load material | 6 | 1 |
| Boom Truck | Setup K-rails and casing stock | 6 | 1 |
| Crew Truck with Welding Equipment | Install casings | 4 | 1 |
| Drill/Bore Rig | Install casing | 6 | 1 |
| Excavator | Excavate bore pits | 6 | 1 |
| Large Crane | Setup pit shoring and baker tanks | 3 | 2 |
| Pickup with Generator | Cut roads for bore pits | 4 | 1 |
| Pump | Dewater bore pits | 6 | 1 |
| Sawcutting Machine | Cut roads for bore pits | 4 | 1 |
| Skid-steer Loader | Load materials, clean construction site | 3 | 1 |
| Small Crane | Set bore rig | 4 | 1 |
| Vacuum Truck | Clean construction site | 4 | 1 |
| 69-kV Loop-In | | | |
| <i>Foundation Installation</i> | | | |
| Backhoe | Excavate soil | 4 | 1 |
| Boom Truck | Place rebar cage | 3 | 1 |
| Drill/Bore Rig | Excavate soil | 8 | 1 |
| Forklift | Place materials | 4 | 1 |
| Generator | Provide power to the work area | 4 | 1 |
| <i>Pole Installation and Removal</i> | | | |
| Jack Hammer | Break up existing foundation | 8 | 1 |
| Air Compressor | Power tools | 8 | 1 |
| Boom Truck | Erect poles | 8 | 1 |
| Bucket Truck | Erect poles and install conductor | 8 | 1 |
| <i>Conductor Installation and Cutover</i> | | | |
| Boom Truck | Move materials and install conductor | 7 | 1 |
| Bucket Truck | Move materials and install conductor | 7 | 2 |
| Pulling Rig | Pull conductor into position | 7 | 1 |
| Telecommunication System Extension | | | |
| <i>Duct Bank Construction and Vault Installation</i> | | | |
| Backhoe | Excavate trench | 3 | 1 |
| Skid-steer Loader | Excavate, move, and load materials | 3 | 1 |

Source: SDG&E, 2015d (Attachment A: Revised Construction Equipment and Vehicle Summary).

Note: Telecommunication cable installation would use the same equipment as the distribution cable installation; vehicles with an operating time of zero would be driven to the site and parked.

| Table B.1-7: Construction Personnel Requirements | | |
|--|--------------------------|--------------------|
| Activity | Position | Approximate Number |
| Proposed Vine 69/12-kV Substation | | |
| Site Development and Grading Construction | Construction Manager | 1 |
| | Superintendent | 1 |
| | Foreman | 2 |
| | Operator | 15 |
| | Laborer | 10 |
| | Inspector | 2 |
| | Grade Checker / Surveyor | 2 |
| Retaining/Boundary Wall Construction | Construction Manager | 1 |
| | Superintendent | 1 |
| | Operator | 4 |
| | Laborer | 8 |
| | Inspector | 1 |
| Below-Grade Construction | Foreman | 1 |
| | Laborer | 4 |
| | Concrete Finisher | 2 |
| | Equipment Operator | 1 |
| | Haul Truck Driver | 1 |
| | Concrete Truck Driver | 1 |
| | Water Truck Driver | 1 |
| | Standby Electrician | 1 |
| Substation Equipment Installation | Crew Foreman | 2 |
| | Journeyman | 8 |
| | Apprentice | 2 |
| | Assistant | 1 |
| | Operator | 2 |
| | Wiring Foreman | 1 |
| | Wiremen | 2 |
| | Relay Inspector | 2 |
| | Relay Technician | 4 |
| 12-kV Distribution Relocation | | |
| Duct Bank Construction and Vault Installation – Daytime/Nighttime ^a | Foremen | 1 to 2 |
| | Inspector | 1 to 2 |
| | Journeyman | 1 to 2 |
| | Operator | 4 to 8 |
| | Laborer | 13 to 26 |
| Cable Installation and Cutover | Foreman | 3 |
| | Journeyman | 6 |
| | Apprentice | 3 |
| Jack-and-Bore | Foreman | 1 |
| | Welder | 1 |
| | Helper | 2 |
| | Laborer | 3 |
| | Surveyor | 1 |
| 69-kV Loop-In | | |
| Foundation Installation | Foreman | 1 |
| | Laborer | 4 |
| Pole Installation and Removal | Foreman | 1 |
| | Lineman | 4 |
| Conductor Installation and Cutover | Foreman | 1 |
| | Lineman | 4 |

| Table B.1-7: Construction Personnel Requirements | | |
|--|------------|--------------------|
| Activity | Position | Approximate Number |
| Telecommunication System Extension ^b | | |
| Cable Installation | Foreman | 1 |
| | Inspector | 1 |
| | Journeyman | 1 |
| | Laborer | 4 |
| | Splicer | 2 |
| Energization | | |
| Testing and Commissioning | Foreman | 2 |
| | Journeyman | 6 |
| | Engineer | 1 |

Source: SDG&E, 2014 (Table 3-5), 2015b (Table 2-5 12-kV Distribution Relocation), and 2015d (Attachment C, Duct Bank Construction Vault Installation – Daytime/Nighttime).

Notes:

- (a) Because a construction contractor has not been selected, SDG&E has assumed up to four crews, two during daytime hours and two during nighttime hours, may work on the 12-kV duct bank construction and vault installation each day. As a result, a range of personnel has been included for this activity.
- (b) Construction personnel responsible for the installation of the 12-kV distribution relocation underground duct banks will also construct the underground duct banks required for the telecommunications system extension.

Construction Truck and Vehicle Trips

A summary of the number of truck trips required to construct each of the Proposed Project's components has been provided as Table B.1-8 (Construction Truck Trip Summary). Table B.1-9 (On-Road Vehicle Trips) provides a detailed list of all on-road vehicle requirements for the Proposed Project (SDG&E, 2015a).

| Table B.1-8: Construction Truck Trip Summary | |
|--|----------------------------------|
| Proposed Project Component | Approximate Truck Trips Required |
| Proposed Vine Substation | 2,650 |
| 12-kV Distribution Relocation and Telecommunication System Extension | 1,900 |
| 69-kV Loop-In | 400 |

Source: SDG&E, 2014 (Table 3-3), 2015b (Section 2.6.5, Construction Schedule for 12-kV Distribution Relocation).

| Table B.1-9: On-Road Vehicle Trips | | | | |
|------------------------------------|-------------------|------------------|---------------|-------------|
| Component | Vehicle Type | Vehicle Category | Trips per day | Total Trips |
| Proposed Vine Substation | | | | |
| Site Development | Commuter Trip | Worker | 33 | -- |
| | Dump Truck | Hauling | -- | 909 |
| | Maintenance Truck | Vendor | 2 | -- |
| | Asphalt | Hauling | -- | 13 |
| | Delivery | Vendor | 5 | -- |
| Wall Construction | Commuter Trip | Worker | 15 | -- |
| | Delivery | Vendor | 1 | -- |
| | Maintenance Truck | Vendor | 1 | -- |
| Below Grade | Commuter Trip | Worker | 12 | -- |
| | Dump Truck | Hauling | -- | 50 |
| | Concrete Truck | Hauling | -- | 83 |
| | Delivery | Vendor | 2 | -- |
| Substation Equipment | Commuter Trip | Worker | 24 | -- |

| Table B.1-9: On-Road Vehicle Trips | | | | |
|--|------------------------|------------------|---------------|-------------|
| Component | Vehicle Type | Vehicle Category | Trips per day | Total Trips |
| Installation | Crew Truck | Worker | 5 | -- |
| | Delivery | Vendor | 3 | -- |
| 12-kV Distribution Relocation | | | | |
| Duct Bank and Vault Installation – West of Interstate (I-) 5 | Commuter Trip | Worker | 20 | -- |
| | Dump Truck | Hauling | -- | 280 |
| | Construction Truck | Worker | 3 | -- |
| | Pickup Truck | Worker | 3 | -- |
| | Pickup with Saw Cutter | Worker | 2 | -- |
| | Concrete Truck | Hauling | -- | 398 |
| | Asphalt | Hauling | -- | -- |
| | Delivery | Vendor | 2 | -- |
| Duct Bank and Vault Installation – East of I-5 | Commuter Trip | Worker | 20 | -- |
| | Pickup Truck | Worker | 8 | -- |
| | Equipment Truck | Worker | 32 | -- |
| | Dump Truck | Hauling | -- | 187 |
| | Concrete Truck | Hauling | -- | 259 |
| | Crew Truck | Worker | 1 | -- |
| | Tractor Truck/Trailer | Vendor | 2 | -- |
| | Emulsion Trailer | Vendor | 2 | -- |
| Cable Installation | Commuter Trip | Worker | 12 | -- |
| | Line Truck | Worker | 1 | -- |
| | Splice Truck | Worker | 1 | -- |
| | Pickup truck | Worker | 1 | -- |
| | Delivery | Vendor | 2 | -- |
| 69-kV Loop-In | | | | |
| Foundation Installation | Commuter Trip | Worker | 5 | -- |
| | Pickup Truck | Worker | 2 | -- |
| | Concrete Truck | Hauling | -- | 20 |
| | Dump Truck | Hauling | -- | 15 |
| | Delivery | Vendor | 2 | -- |
| Pole Installation and Removal | Commuter Trip | Worker | 5 | -- |
| | Delivery | Vendor | 2 | -- |
| Conductor Installation | Commuter Trip | Worker | 5 | -- |
| | Wire Truck/Split Reel | Vendor | 1 | -- |
| | Delivery | Vendor | 2 | -- |
| Telecommunications System Upgrade | | | | |
| Duct Bank and Vault Installation | Commuter Trip | Worker | -- | -- |
| | Dump Truck | Hauling | -- | 10 |
| | Concrete/Asphalt Truck | Hauling | -- | 14 |
| | Delivery | Vendor | 2 | -- |
| Cable Installation | Commuter Trip | Worker | 9 | -- |
| | Delivery | Vendor | 2 | -- |
| Energization | | | | |
| Testing and Commissioning | Commuter Trip | Worker | 9 | -- |

Source: SDG&E, 2015a (Attachment H: On-Road Vehicle Trips).

Construction Schedule

The total construction time including grading, construction, energizing, and testing of the Proposed Project is expected to take approximately 17 months, starting in March 2016. Substation construction would generally take place between 7:00 a.m. and 7:00 p.m. from Monday through Saturday (SDG&E, 2015b). Due to the potential traffic impacts related to relocation of the distribution circuits, construction within Kettner Boulevard would occur during the evenings. In addition, some concrete pours may take place during an extended day, depending on the size of the pour. Transformer oil filling may also require vacuum pulls and oil installation, which in turn may require continuous work through the night. Actual cutovers of the power line and distribution circuits to the substation would be dependent on loading requirements, and would be done in a manner that maintains uninterrupted service to customers. This may require part or all of this work to be done after normal business hours or on the weekend and/or nights.

Construction efforts for the Proposed Project would occur in accordance with Chapter 5, Article 9.5, Division 4 of the City of San Diego Municipal Code (Noise Ordinance) and would generally occur between the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday. Construction activities would generally adhere to the noise ordinance of the local jurisdiction. While the final construction schedule for the 12-kV distribution work within Kettner Boulevard would be determined during through the encroachment permit process with the City of San Diego, the anticipated working hours on Kettner Boulevard would be from 10:00 p.m. to 5:00 a.m. to reduce potential traffic impacts associated with the relocation of the distribution circuits (SDG&E, 2015b). All other distribution relocation activities would occur during the normal construction hours. During nighttime hours, standard lighting units (i.e., a trailer with a lighting tower) would be set up within each work area (SDG&E, 2015a).

In the event construction activities are necessary on days or hours outside of what is specified by the local ordinance (for example, if existing lines must be taken out of service for the work to be performed safely and the line outage must be taken at night or on a weekend for system reliability reasons), SDG&E would obtain variances as necessary from appropriate jurisdictions where the work would take place. SDG&E has informed the City of San Diego that a permit from the Noise Abatement and Control Administrator per Municipal Code Section 59.5.0404 will be sought for the work occurring after 7:00 p.m. (SDG&E, 2015a).

A detailed construction schedule is provided in Table B.1-10 (Proposed Construction Schedule).

| Table B.1-10: Proposed Construction Schedule | | | | |
|---|---|--------------------------------------|-------------------------------|-----------------------------|
| Proposed Project Component | Activity | Approximate Duration (Months) | Anticipated Start Date | Anticipated End Date |
| Proposed Vine Substation | Site Development and Grading | 3 | March 2016 | May 2016 |
| | Retaining Wall/Boundary Wall Construction | 2 | May 2016 | June 2016 |
| | Below-Grade Construction | 6 | June 2016 | November 2016 |
| | Substation Equipment Installation | 8 | November 2016 | June 2017 |
| 12-kV Distribution Relocation | Duct Bank Construction and Vault Installation | 6 | October 2016 | March 2017 |
| | Cable Installation and Cutover | 3 | April 2017 | June 2017 |
| | Jack-and-Bore | 0.75 | January 2017 | January 2017 |

| Table B.1-10: Proposed Construction Schedule | | | | |
|---|---|-------------------------------|------------------------|----------------------|
| Proposed Project Component | Activity | Approximate Duration (Months) | Anticipated Start Date | Anticipated End Date |
| 69-kV Loop-In | Foundation Installation | 0.5 | November 2016 | November 2016 |
| | Pole Installation and Removal | 3.5 | Mid-November 2016 | February 2017 |
| | Conduit Installation and Cutover | 2 | January 2017 | February 2017 |
| Telecommunication System Extension | Duct Bank Construction and Vault Installation | 1 | April 2017 | April 2017 |
| | Cable Installation | 1 | May 2017 | May 2017 |
| Energization | Testing and Commissioning | 4 | March 2017 | June 2017 |
| | Energization | 0.5 | July 2017 | July 2017 |

Source: SDG&E, 2015b (Table 2-6).

B.1.11.2 Vine Substation Construction

Site Development and Grading

Prior to installation and construction of the proposed Vine Substation, the site would need to be prepared/developed. This would ensure that the site conditions reflect the engineering requirements. Site preparation and development would start with the removal of the existing paved parking lot surface, which would require the use of excavators, front-end loaders, concrete saws, and/or bulldozers (see Table B.1-6, Construction Equipment Requirements).

Once cleared, remedial grading would take place based on the recommendations of the geotechnical investigation, which would determine the appropriate on-site pad elevation and foundation support that also maintains adequate site drainage. On-site material would be reused to the extent possible, as recommended by a Geotechnical Engineer. These activities are anticipated to generate approximately 4,200 cubic yards (CY) of material for off-site disposal. Approximately 4,600 CY of select fill would be imported to help achieve the conceptual design elevation. Site grading would be accomplished primarily with bulldozers and backhoes, which would condition, cut and fill, and blend the native soil and imported material to the desired pad elevations. Construction of the boundary walls described in Section B.1.10.1 under “Substation Perimeter” would begin once grading is complete. An approximately 12-inch layer of Class II aggregate base (approximately 2,100 CY) would also be imported and installed over the building pad area for the finished surface.

Construction of the proposed Vine Substation would require approximately 6,700 CY, or an estimated 1,470 haul truckloads, of imported fill to develop the proposed substation site. Potential sources of import material include Carrol Canyon Rock, Asphalt & Ready Mix (10051 Black Mountain Road, San Diego, CA); Superior Reach Mix Concrete, L.P. (7500 Mission Gorge Road, San Diego, CA); and Vulcan Material Company (2041 Heritage Road, Chula Vista, CA) (SDG&E, 2015d). Haul trucks would operate periodically, as needed, during the grading phase of construction. In general, an average of no more than 20 truck trips per day for an estimated five months would be required to complete the proposed substation grading and boundary wall installation. In addition, approximately five additional trips per day are anticipated for the delivery of materials and equipment for the duration of construction.

Construction trip details are summarized above in Table B.1-8 (Construction Truck Trip Summary), and Table B.1-9 (On-Road Vehicle Trips) provides a detailed list of all on-road vehicle requirements for the Proposed Project.

Below-Grade Construction

Following site development, below-grade work would begin, which would include the construction of structure and equipment foundations, underground ducts, the ground grid, and erection of the control shelter. The construction of the distribution circuits and tie lines surrounding the Vine Substation would start while the substation is under construction. Concrete trucks, backhoes, ditch-witches, and skid steer loaders would be used for the below-grade work (see Table B.1-6, Construction Equipment Requirements).

Above-Grade Construction

Once the grading activities and below-grade construction are complete, major equipment and structures would be installed and anchored on their respective foundations. The following steps would be taken to install the above-grade equipment:

- The 69-kV rack would be erected.
- The 69-kV circuit breakers would be installed on their foundations.
- The control shelter would be constructed, and relay panels, controls, battery, and station lighting and power would be installed.
- The ground grid, control, communication, and power ducts would be installed and wiring of the equipment controls and protection devices would follow.
- The 69/12-kV transformers would be installed on their foundations, assembled, and filled with oil.
- The 12-kV switchgear, capacitors, and reactor would be installed on their foundations.

Power lines and distribution circuits would be completed and connected inside the substation following final installation of the substation structures and equipment. The communication equipment for the operation of the Proposed Project would be connected inside the control shelter. Testing would be performed on all equipment after the equipment is installed and wired, and before placing it in service.

Equipment would be placed in service once the 12-kV circuits and 69-kV loop-in are ready to be energized and are tested outside the substation. Portable cranes and heavy hauling trucks would be employed to bring in the 69/12-kV transformers. Substation crews, assist vehicles, forklifts, man lifts, and boom trucks would be used to construct the substation. Oil-processing equipment and vacuum pumps would be used to fill transformers with oil. Pickup trucks and vans would be used for the wiring and control testing of the substation equipment. Line trucks, assist vehicles, and cable dolly trailers would be used for construction of the power line and distribution circuits.

A temporary tap to an existing distribution line may be installed to provide electrical service to the substation staging area during construction. This temporary tap may be used to power construction trailers, lighting, or small hand-held machinery or tools until the substation is energized. The temporary tap may require up to three directly buried wood poles (approximately 20 feet in height) to connect a distribution line from an existing underground distribution transformer located adjacent to the substation site.

Cleanup and Post-Construction Activities

All areas that are temporarily disturbed during construction would be restored to preconstruction conditions, to the extent practicable, once construction of the substation is complete. Cleanup efforts would include removal of all construction debris for recycling and/or disposal off site. In addition,

landscaping would be installed consistent with SDG&E's Landscape Plan, which is described above in Section B.1.10.1 under "Substation Perimeter". In the event that non-hazardous, non-contaminated construction materials, such as concrete or asphalt, are generated, these materials would be recycled at either Vulcan Materials Landfill (10051 Black Mountain Road, San Diego, CA 92126), Ennis, Inc. (12535 Vigilante Road, Lakeside, CA 92040) (SDG&E, 2015b), or another appropriate local facility.

B.1.11.3 12-kV Distribution Relocation

As part of the Proposed Project, portions of the existing 12-kV distribution system would need to be relocated. This requires the installation of new underground duct banks and vaults using temporary workspaces located within City of San Diego streets and public areas. The cable installation process would require a network of pull sites located adjacent to the proposed and existing underground vaults, as shown in Figure B.1-3a-k (Detailed Project Components). These pull sites would be used to stage the equipment necessary to pull the underground cable through the installed conduit (see "Work Areas" discussion below). A truck holding a reel of cable is set up on one end of the pull and a winch/line truck/similar piece of equipment on the other end. Rope is installed when the conduit is put in, which allows the line crew to pull larger rope or steel cable into the conduit with it (SDG&E, 2015c). These pull sites would be approximately 50 feet long by 20 to 30 feet wide. With the exception of the two pull sites that would be established near the intersections of Kettner and West Hawthorn Street and Pacific Highway and West Hawthorn Street, all pull sites would be located within the underground trench work area. All pull sites would be located within the paved portion of existing City streets or associated sidewalks and road shoulders; therefore, no improvement would be required prior to use.

Work Areas

In addition to the staging areas discussed above, temporary workspace would be required for the installation of new duct banks and vaults associated with the 12-kV distribution circuit relocations. Generally, underground trench work area would be approximately 30 feet wide, centered on the distribution circuit alignment. In locations where vaults would need to be installed (see Figure B.1-3a-k, Detailed Project Components), additional workspace would be established measuring approximately 60 feet by 40 feet centered on the vault location. These work areas would support all cable installation activities, including telecommunication system extension, as well as the associated construction equipment to perform the work. A total of approximately 10,220 linear feet (7.04 acres) of workspace would be required to install the duct banks (SDG&E, 2015a).

Site preparation for the underground trench work area and vault installation work areas would involve site mark out, with offsets of the proposed trench alignment, as well as setting up traffic controls according to the applicable traffic control plan prior to construction. Additional temporary work spaces measuring approximately 50 feet by 30 feet would be established to facilitate the installation of switches and capacitors. These anticipated workspace requirements are summarized in Table B.1-5 (Temporary Workspace Requirements) and depicted in Figure B.1-3a-k (Detailed Project Components).

As described below under "Jack-and-Bore," the portion of the new underground duct bank that crosses the MTS railroad line on West Palm Street would be installed using the jack-and-bore method of construction. In order to excavate the required entry and receiving pits, and to operate the associated construction equipment, an approximately 100-foot by 25-foot jack-and-bore work area would be established at the entry pit and a second approximately 20-foot by 16-foot work area would be established at the exit pit. In addition, an approximately 100-foot by 55-foot paved, fenced lot at the intersection of West Palm Street and Pacific Highway currently used by Budget Rent A Car would be used for the staging and operation of equipment and materials. The jack-and-bore work areas are

depicted on Figure B.1-3h (Detailed Project Components). The temporary work area specifications for the Proposed Project are provided above in Table B.1.5 (Temporary Workspace Requirements).

Access

The 12-kV distribution relocation activities would be access from Kettner Boulevard, Vine Street, India Street, Redwood Street (original alignment) or West Palm Street (optional alignment), West Laurel Street, Columbia Street, and State Street. No new permanent access roads would be constructed.

Trenching

Other utility companies would be notified prior to trenching to allow the utilities time to locate and mark existing underground utilities along the proposed underground alignment. Exploratory excavations (i.e., potholing) would also be conducted within the ROW to verify the exact location of other existing facilities. All known underground facilities crossed by or in close proximity to the trench would be potholed, surveyed, and indicated on the plan and profile drawings for use during construction. The required pothole frequency depends on the number of facilities to be crossed or located in close proximity to the proposed trench. The pothole frequency would be determined during the final engineering phase (SDG&E, 2015a). Potholing activities would be conducted using hydro excavation (a high pressure water spray) to remove the soil. The soil would then be vacuumed into a sealed container and disposed of at an off-site location in accordance with all applicable laws and regulations. Once a utility is located, it would be measured, photographed, and documented. Silica sand would then be placed over the utility and the rest of the pothole would be backfilled with clean fill material (SDG&E, 2015a).

Coordination with the City may be required to secure encroachment permits for trenching in the City's ROW. It is anticipated that between one and two lanes of Kettner Boulevard would occasionally be closed during trenching activities. During the trenching in the intersection of West Palm Street and Kettner Boulevard, the intersection would be closed for a three- to five-day period (SDG&E, 2015a). Traffic controls would be implemented as required by the Encroachment Permit.

Trenching operations would be staged in intervals so that a maximum of 500 feet of trench would be left open at any one time, or as allowed by permit requirements. At any one time, open trench lengths would not exceed that required to facilitate the installation of the duct bank. Steel plating would be placed over the trenches to maintain vehicular and pedestrian traffic across areas that are not under active construction. A typical drawing of the proposed underground construction activities is provided in Figure B.1-20 (Typical Underground Construction Process within Roadways).

The duct bank would be installed using open-cut trenching techniques. Most of the duct bank would have a single-circuit vertical configuration, as shown in Figure B.1-10 (Typical 12-kV Underground Duct Bank). Transitions to a flat configuration may be required in certain areas to clear substructures in highly congested areas, or to fan out to termination structures at the transition area.

The typical trench dimensions for installation of each duct bank would be between three to six feet deep and two to seven feet wide, depending on the necessary duct bank configuration. Depths may vary depending on soil stability and the presence of existing substructures. The trench would be widened and shored where necessary to meet California Occupational Safety and Health Administration requirements. A photograph of a typical 12-kV trenching installation with shoring is included as Figure B.1-21A (Typical 12-kV Trench Photograph).

Fill generated by excavation activities would be transported to an SDG&E-approved disposal site as described above in Section B.1.11.2 (Cleanup and Post-Construction Activities). Trenches would be dewatered using a portable pump if ground water is encountered. The water would be disposed of in

accordance with acquired permits. For a more detailed list of the permits and approvals necessary for the Proposed Project, see Section B.1.14 (Permits and Approvals). As described previously, traffic controls would also be implemented to direct local traffic safely around work areas. SDG&E would coordinate provisions for emergency vehicle and local access with local jurisdictions as necessary.

Duct Bank Installation

After the trenches for the underground 12-kV duct banks are completed, SDG&E would install the cable conduits (separated by spacers) and pour concrete around the conduits in the trenches to form the duct banks. The duct banks would typically consist of eight five-inch-diameter PVC conduits, which house the electrical cables, as shown in Figure B.1-10 (Typical 12-kV Underground Duct Bank) and in Figure B.1-21B (Typical 12-kV Duct Bank Photograph). The dimensions of the duct banks would be approximately 1.5 feet wide by 2.7 feet tall for a vertical configuration. The duct package would consist of a single 12-kV distribution circuit. Two four-inch conduits would also be installed within the distribution duct bank between the proposed Vine Substation and Kettner Substation for telecommunication purposes.

Once the PVC conduits are installed in the trench, engineered slurry backfill would be imported, placed, and compacted. A road base backfill or slurry concrete cap would be applied and the disturbed road surface would be restored in compliance with local permits. While the completed trench sections are being restored, additional trench would be opened farther down the street. This process would continue until the 12-kV distribution circuits are completed. Each duct bank would have a minimum of 30 inches of cover. Larger trenches would be excavated where vaults are installed, as described in the subsection that follows.

Radial clearance between the distribution duct bank and existing substructures would depend on the soil temperature surrounding the existing substructure. Where the distribution duct bank would cross other substructures that operate at normal soil temperature (e.g., gas lines, telephone lines, water mains, storm drains, and sewer lines), a minimal radial clearance of 12 inches would be required. A minimum radial clearance of 24 inches would be required when the duct bank would be installed parallel to other substructures. Ideally the distribution duct bank would maintain clearances of two to five feet from nearby substructures. Where the duct banks cross or run parallel to substructures that operate at temperatures significantly exceeding normal soil temperature (e.g., other underground power line circuits, primary distribution cables, steam lines, and heated oil lines), additional radial clearance may be required to preserve structural integrity and stability of the distribution duct bank. All work would be done in conformance with SDG&E's current construction and operating practices.

Vault Installation

SDG&E would excavate and install pre-formed concrete splice vaults during trenching for the 12-kV circuit duct banks. The proposed trench alignment and vault locations are shown on Figure B.1-3a-k (Detailed Project Components). The installation of each vault would require an excavation measuring approximately 11 feet by 7.5 feet by 29 feet. The vaults would be used to pull distribution and telecommunications cable through the conduits and splice the cables together during construction. During operation of the Proposed Project, the vaults would provide access to the underground cables for maintenance, inspections, and repairs.

Vaults would be constructed of prefabricated, steel-reinforced concrete and designed to withstand the maximum credible earthquake in the area and traffic loading. The installation process for each vault would occur over a one-week period, beginning with the excavation and shoring of the vault pit, followed by delivery and installation of the vault, filling and compacting the backfill, and repaving the excavated area where necessary. Vault dimensions are detailed above in Table B.1-3 (Vault Dimensions) and shown

in Figure B.1-11 (Typical 12-kV Underground Vault). Photographs of typical vaults similar to the type the Proposed Project would utilize are provided in Figure B.1-22 (Typical Type 3327 Vault and Installation Photographs).

Jack-and-Bore

SDG&E would use the horizontal jack-and-bore construction technique to install approximately 200 feet of proposed conduit near the intersection of West Palm Street and the MTS railroad tracks. Horizontal jack-and-bore is an auguring operation that simultaneously pushes a casing under an obstacle, while removing the displaced material using a rotating auger inside the pushed casing. Boring operations would begin with excavating pits at each end of the bore. The entry pit for the casing would measure approximately 40 feet by 12 feet and the exit or receiving pit would measure approximately 10 feet by six feet. The proposed bore pits would be between 10 and 20 feet deep, depending on the soil type and facilities that would be crossed. In addition, an approximately 30-foot-long section of the existing raised island in the roadway would be temporarily removed to maintain access for the surrounding businesses.

Once the bore pits are complete and shored, boring equipment would be delivered to the site and installed into the entry pit. It is anticipated that a 42-inch casing size made of either steel or a fiberglass-polymer mix would be used for the crossing. A 20-foot section of the casing would be lowered into the pit with the auger inserted and attached to the auguring machine. As the casing is bored toward the receiving pit, additional 20-foot sections of casing would be attached to the previous casing until the casing breaks through at the receiving pit. It is anticipated that water would be used to lubricate the auger during the boring process.

A conduit package, which consists of 12 five-inch PVC ducts supported by polyethylene spacers, would then be pulled through the casing. The casing would then be grouted to secure the conduit package. It is anticipated that between approximately 275 to 500 CY of material would be excavated during the jack-and-bore installation. Following the installation, the bore pits would be backfilled using native material, and the duct bank exiting the casing would be covered with at least 36 inches of slurry. All soil not used for backfill would be hauled off site and disposed of at an approved facility.

A depiction of a typical jack-and-bore installation is provided in Figure B.1-23 (Typical Jack-and-Bore Installation). SDG&E would secure the necessary permits to conduct these specialized construction activities and would implement standard best management practices, including silt fencing and straw wattles, in accordance with the Proposed Project's SWPPP.

Cable Pulling, Splicing, and Termination

After installation of the conduit, SDG&E would install three cables per distribution circuit in the duct banks. Each cable segment would be pulled into the duct bank, spliced at each of the vaults along the route, and terminated at the proposed Vine Substation. To pull the cable through the ducts, a cable reel would be placed at one end of the section and a pulling rig would be placed at the other end. A larger rope would then be pulled into the duct using a previously installed pull line and would be attached to the cable-pulling eyes to pull the cable into the duct. A lubricant would be applied to the cable as it enters the duct to decrease friction during pulling. Generally, the interior of the vault would be rigged with pulling shaves so that the pulling rope and cable enters the conduit in a straight line to avoid damage to the cable or the conduit (SDG&E, 2015c). The electric cables and the communication cable would be pulled through the individual ducts at the rate of two or three segments between vaults per day.

The vaults must be kept dry at all times to keep the unfinished splices dry and prevent other impurities from affecting the cables. Splicing typically takes between two and four hours per 12-kV circuit to complete (SDG&E, 2015a). At each end of the underground segment, the cables would rise out of the ground and terminate within the substation.

Cleanup and Post-Construction Restoration

Following completion of construction, all areas that are temporarily disturbed by the 12-kV distribution relocation activities would be restored to pre-construction conditions, to the extent practicable. Restoration would include the removal of all construction debris for recycling or disposal off site and repaving, as appropriate.

B.1.11.4 69-kV Loop-In

Work Areas

The 69-kV Loop-in would require an approximately 150-foot-long by 40-foot-wide temporary workspace along Vine Street to accommodate construction equipment and activities during the removal of the existing wood power line pole and associated guy pole. A second work area, approximately 100 feet long by 40 feet wide, would be established along California Street to remove a second wood pole. No grading or vegetation removal is anticipated as the poles are located within the existing sidewalk.

In order to install the three new poles that would facilitate the loop-in of TL604, two additional work areas would be established. The first work area would measure approximately 250 feet long by 55 feet wide and would be located along Pacific Highway. The work area would be located directly adjacent to the existing fence that separates Pacific Highway from the existing railroad ROW. This placement would require the closure of up to two lanes of traffic along the northbound direction of Pacific Highway during the installation of the new poles, conductor installation, and removal activities. The existing vegetation within this pole work area may be cleared to establish safe operating conditions for construction equipment. The second work area would be located adjacent to the existing distribution pole. The second work area would be used to facilitate the installation of a new power line pole for the 69-kV loop-in. This work area would measure approximately 130 feet long by 50 feet wide and would be placed within an existing parking lot along Pacific Highway. The work areas necessary for the 69-kV Loop-in are shown in Figure B.1-3a (Detailed Project Components).

Conductor installation and removal would require two additional work areas. The first work area would be located along Frontage Road and would measure approximately 80 feet long by 40 feet wide. The second work area would measure approximately 75 feet long by 40 feet wide. The work area would be located along Pacific Highway. The work areas necessary for conductor installation and removal are also detailed in Figure B.1-3a (Detailed Project Components).

Access

The 69-kV loop-in would primarily be accessed from Vine Street, California Street, and Pacific Highway. Access to the temporary work areas would be provided by overland travel from California Street and Vine Street within newly acquired ROW. No new permanent access roads would be constructed for the 69-kV loop-in. (SDG&E, 2014)

Clearing and Grading

Minimal grading and vegetation removal are anticipated for the 69-kV loop-in since the power line poles would be located adjacent to Pacific Highway. If vegetation removal is required, mowers would be used to clear the area required for pole installation. Material removed from the clearing site during construction would be spread over the existing area as appropriate, or would be disposed of off site in accordance with all applicable laws. The vegetation and habitat communities that exist at the potential clearing sites are discussed in Section B.3.4 (Biological Resources).

Wood Pole Removal

The existing wood pole removal would begin with crews dismantling the hardware on the existing poles using cranes and aerial manlifts. The old poles would be cut off at ground level and transported off site by flatbed truck for disposal at an approved facility. The base of the poles would be abandoned in place if they cannot be removed. If the base of the poles are removed, then the voids would be backfilled and compacted with native soil, and the surrounding area would be restored. Figure B.1-15 (Typical Existing 69-kV Wood Pole) serves as an example of the type of pole to be removed.

Steel Pole Removal

The existing steel guy pole and associated guy wires would be dismantled and removed by cranes and aerial manlifts. The pole and guy cables would be transferred to a flatbed truck using a small, truck-mounted crane. The material would then be transported off site for recycling or disposal at an approved facility. Once the pole has been removed, the reinforced concrete foundation for the steel guy pole would be jack-hammered to approximately 12 to 18 inches below grade. All debris located near the vicinity of the foundation would be removed from the site and would be recycled or disposed of at an approved facility. The remaining hole would then be backfilled with material similar to the surrounding area, and the site restored. Figure B.1-16 (Typical Existing Stub Guy Pole) serves as an example of the type of pole to be removed.

Steel Pole Installation

Foundations

Additional geotechnical investigations would be conducted prior to installation of the new subtransmission poles. Two eight-inch diameter borings, up to 35 feet deep, would be performed in the vicinity of the proposed pole locations (SDG&E, 2015a).

The three steel poles that would be installed as part of the Proposed Project would be placed on new drilled concrete pier foundations. Following the preparation of the pole work areas, the foundation process would begin with the excavation of a hole using a truck-mounted excavator with augers of various diameters to match the diameter and depth requirements of the foundation.

Each foundation hole would measure approximately nine feet in diameter and approximately 40 feet deep, requiring the excavation of approximately 95 CY of soil, depending on the conditions determined during the geotechnical investigations. Following the excavation of the foundation hole, a reinforcing steel cage and anchor bolts would be assembled at one of the Proposed Project's staging areas, transported to the foundation site, and installed within the foundation hole.

After completing the cage installation, a form would be built and concrete would be poured to a height of approximately two feet above grade. Each foundation would require approximately 99 CY of concrete to be delivered to the foundation location. Concrete would be delivered directly to the pole's location in concrete trucks with a capacity of up to 12 CY. Steel plating would be placed over excavated areas, where appropriate, to maintain vehicular and pedestrian traffic

Pole Installation

Steel poles would be delivered in one or more sections to the pole installation sites via flatbed truck and assembled on site using a small, truck-mounted crane. The poles would typically have three crossarms, supporting one circuit on one side of the pole. The crossarms would be bolted to the pole, and the

insulators would then be bolted to the crossarms. After assembly, a large crane would be used to lift and set the poles into place on the anchor bolts embedded in the concrete foundation. The nuts on the foundation anchor bolts would then be tightened and secured to complete the installation. Figure B.1-17 (Typical Proposed 69-kV Tubular Steel Pole) shows a typical design of the poles to be installed.

Overhead Conductor Installation

Conductor-stringing operations would be facilitated with the installation of sheaves or “rollers” on the pole crossarms during using aerial manlifts (e.g., bucket trucks). The sheaves would allow the conductor to be pulled through each pole until the entire line is ready to be pulled up to the final tension position.

The installation would first begin with the placement of a pull rope in the sheaves. Once the rope is in place, it would be attached to a steel cable and pulled back through the sheaves. The conductor would then be attached to the cable and pulled back through the sheaves using conventional tractor-trailer pulling equipment located at the pull site. This process would be repeated for each conductor.

After the conductor is pulled into place, the sags between the structures would be adjusted to a pre-calculated level. The line would be installed with a minimum ground clearance of 35 feet from the ground to the lowest conductor. The conductor would then be clipped into the end of each insulator, the sheaves would be removed, and vibration dampers and other accessories would be installed. This process would be repeated for each conductor. A typical drawing of the conductor installation procedure is provided as Figure B.1-24 (Typical Overhead Conductor Installation).

The work areas located along Pacific Highway would be used to facilitate the pulling activities. These work areas would be used to load the tractors and trailers with reels of conductors, and the trucks with tensioning equipment. These sites would also be used to collect conductor after it is removed from the existing lines and placed onto reels for transport off site. Figure B.1-3a-k (Detailed Project Components Map) details the locations of the work areas.

Dewatering

Previous cable underground projects in the region have not encountered water during construction activities (SDG&E, 2015c). Due to this prior knowledge, no dewatering is anticipated during construction. However, in the event that groundwater is encountered, it would potentially occur during construction of the duct bank, handhole installation for the 12-kV distribution circuits and telecommunication system extension, or foundation excavation for the 69-kV loop-in. Should dewatering be necessary, the following construction dewatering procedures would be implemented during construction:

- A submersible pump would be installed.
- The groundwater would be pumped to a desiltation tank (i.e., baker tank) for sediment and filtering. Baffles would be installed in the tank to increase sedimentation, and the water in the tank would be allowed to flow out from the opposite end for testing.
- The water would then be tested to ensure compliance with the Regional Water Quality Control Board (RWQCB) National Pollutant Discharge Elimination System requirements. If the water quality does not meet permit requirements, additional baker tanks would be used and/or additional treatment or filtering would be performed until the applicable requirements are met.
- The water would be disposed of at an approved SDG&E disposal site.

Cleanup and Post-Construction Restoration

With the exception of areas around poles that would be kept clear of shrubs and other obstructions for inspection and maintenance purposes, all other areas that are temporarily disturbed would be restored to pre-construction conditions, to the extent practicable, following the completion of the 69-kV loop-in. Post-construction restoration would include grading to original contours, reseeding, and repairing the current pavement, as appropriate. This process will be completed using the personnel identified in Table B.1-7 (Construction Personnel Requirements) and with the equipment identified in Table B.1-6 (Construction Equipment Requirements). The drainage patterns in the Proposed Project area will be returned to near pre-construction conditions (SDG&E, 2015a).

B.1.11.5 Fiber Optic Telecommunication System Construction

As described in Section B.1.10.4 (Telecommunication System Extension), new fiber optic cable would be installed from an existing underground vault located on Pacific Highway to the proposed Vine Substation. The new fiber-optic cable would also be installed from the proposed Vine Substation to the Kettner Substation. The connection from Pacific Highway to the proposed Vine Substation would be located in an overhead configuration along a new power line ROW, while the connection between the proposed Vine substation and Kettner Substation would be located in a new underground duct bank constructed during the 12-kV distribution relocation. An existing AT&T telephone line at the proposed Vine Substation site would be upgraded and relocated from the existing service to the new substation. The connection would originate from one of three locations located along the perimeter of the proposed Vine Substation site as depicted in Figure B.1-3a (Detailed Project Components). The final location of the telephone line connection would be determined during final engineering and through additional coordination with AT&T.

Underground Duct Bank

The fiber-optic telecommunication extension would be installed within approximately 2,850 feet of new underground duct banks constructed along Kettner Boulevard between the proposed Vine Substation and Kettner Substation as part of the 12-kV circuit relocation work. Approximately 100 additional feet of new underground duct bank would be constructed between an existing handhole located within Pacific Highway and one of the new TSPs that would be installed as part of the 69-kV loop-in. The underground duct banks, where the telecommunications system would be installed, would include two additional four-inch-diameter PVC conduits as depicted in Figure B.1-10 (Typical 12-kV Underground Duct Bank). The construction methods used to install the underground duct banks for the fiber-optic telecommunication system extension would be similar to those discussed above in Section B.1.11.3 under “Duct Bank Installation.”

In locations where duct banks contain both fiber-optic telecommunication lines and 12-kV distribution lines and a vault is required, a separate underground duct bank comprised of two four-inch-diameter PVC conduits encased in a slurry mixture would be used to separate the telecommunication cable and route it around the vault to a handhole. This separate underground telecommunication duct bank would be approximately 3 feet tall and 1.5 feet wide. A typical drawing of the proposed underground duct bank is provided in Figure B.1-18 (Typical Telecommunication Underground Duct Bank).

Approximately four underground handholes would be installed along the duct bank to facilitate pulling and splicing during construction and inspection, maintenance, and repair during operation. These precast concrete handholes measure approximately 44 inches long, 32 inches wide, and 24 inches deep. A typical drawing of the proposed telecommunication handhole is provided in Figure B.1-19 (Typical

Telecommunication Underground Handhole). The proposed locations of these facilities are depicted in Figure B.1-3a-k (Detailed Project Components).

B.1.12 Operation and Maintenance

B.1.12.1 Proposed Vine 69/12-kV Substation

Once the proposed Vine Substation is constructed and placed in service, it would be unmanned. The proposed Vine Substation would be monitored and controlled by SDG&E's Remote Control Center. As described in Section B.1.10.2 (Substation Perimeter), a boundary wall would be constructed around the proposed Vine Substation and all access gates would be locked to prevent unauthorized entry. In addition, signage would be posted on the substation's exterior and at the entryway to restrict entry to authorized SDG&E personnel.

Ongoing maintenance would involve testing, monitoring, and repair of the equipment, as well as emergency and routine operations. Operation and maintenance (O&M) activities would be performed by current SDG&E employees (SDG&E, 2015b). Routine maintenance is expected to require approximately six trips per year by a two- to four-person crew. Routine operations would require one or two workers in a light utility truck to visit the substation on a daily or weekly basis. It is anticipated that one annual major maintenance inspection would occur, requiring an estimated 10 personnel. It is anticipated that this inspection would take approximately one week to complete. This procedure would include a full inspection of the 69-kV circuit breakers and may include an overhaul of the 69/12-kV transformer load tap control settings. The crews would access the site using standard construction pick-up trucks and line trucks via existing access routes. The line trucks would carry the maintenance tools necessary for inspections. A majority of the inspections would be visual in nature. The work would generally be conducted between the hours of 7:00 a.m. and 7:00 p.m. (SDG&E, 2015a). Nighttime maintenance activities are not expected to occur more than once a year.

Landscape maintenance would occur on an as-needed basis for purposes of enhancing the streetscape along the perimeter of the substation and for safety and/or access. Such activities would generally require the presence of one to two maintenance vehicles and one or more employees to clear and/or trim vegetation to ensure that an adequate working space is maintained around the substation facilities.

B.1.12.2 12-kV Distribution Relocation

Maintenance requirements for the 12-kV distribution may include replacement of damaged cables or connectors. Maintenance crews would consist of four to six personnel and require a tool truck, cable truck, assist truck, and/or trouble shooter truck. Routine inspections would occur annually to identify connection problems and inspect for equipment degradation.

B.1.12.3 69-kV Loop-In

It is anticipated that the power line circuit that loops into the substation would be inspected once per year. Non-emergency major maintenance may include activities such as the replacement of damaged insulators. Maintenance crews may consist of as many as four people and may require a tool truck, an assist vehicle, and a large bucket lift truck. Polymer insulators have been selected for the Proposed Project and do not require washing (SDG&E, 2015a).

Operations and maintenance activities for the 69-kV loop-in would include routine inspection, maintenance, and repair activities. Both routine preventive maintenance and emergency procedures would occur in order to ensure that integrity of the system is maintained over the long term. Inspections

may occur through ground patrols visiting the facilities. At a minimum, such routine inspections would occur annually to identify potential corrosion, equipment misalignment, loose fittings, and/or other mechanical problems.

B.1.12.4 Telecommunication System Extension

Typically, ongoing or routine maintenance activities for a fiber optic telecommunications cable is not required. As a result, the only activities associated with the operation and maintenance of this Proposed Project component would stem from emergency repairs or future changes to the fiber optic network design.

B.1.13 Applicant-Proposed Measures

In addition to the above Project design features and ordinary construction/operating restriction included as part of the Proposed Project, SDG&E would also incorporate applicant-proposed measures (APMs) developed by SDG&E specifically for the Proposed Project. Table B.1-11 (Applicant-Proposed Measures) identifies the APMs and indicates which Proposed Project component they apply to. These measures are considered part of the Proposed Project and are considered in the evaluation of environmental impacts. CPUC approval would be based upon SDG&E adhering to the Proposed Project as described in this document, including this project description and the APMs, as well as any adopted mitigation measures.

Implementation of Applicant-Proposed Measures

As described by SDG&E in the PEA, SDG&E would be responsible for overseeing the assembly of construction and environmental teams that would implement and evaluate the Proposed Project APMs. SDG&E maintains an environmental compliance management program to allow for implementation of the APMs to be monitored, documented, and enforced during each Proposed Project phase, as appropriate. All those contracted by SDG&E to perform this work would be contractually bound to properly implement the APMs to ensure their effectiveness in reducing potential environmental effects.

Implementation of the proposed APMs would be the responsibility of the environmental compliance team. The team would include an environmental project manager, resource specialists, and environmental monitors. All APMs would be implemented consistent with applicable federal, State, and local regulations. The environmental compliance team would be responsible for the inspection, documentation, and reporting of SDG&E compliance with all APMs as proposed. Environmental specialists would be retained as needed to verify that all APMs are properly implemented during the construction phase.

If conditions occur where construction may potentially adversely affect a known or previously unknown environmentally sensitive resource, or if construction activities significantly deviate from Proposed Project requirements, SDG&E monitors and/or contract administrator(s) would have the authority to halt construction activities until an alternative method or approach can be identified. Any concerns that arise during implementation of the APMs would be communicated to the appropriate authority to determine if corrective action is required, or the concerns would be addressed on site, as applicable.

As the proposed APMs are implemented, environmental monitors from SDG&E would be responsible for the review and documentation of such activities. Field notes and digital photographs would be used to document and describe the status of APMs as necessary.

Table B.1-11: Applicant Proposed Measures

| APM Number | Description | Justification | Proposed Project Component | | | |
|------------|--|--|-----------------------------------|-------------------------------|---------------|------------------------------------|
| | | | Proposed Vine 69/12-kV Substation | 12-kV Distribution Relocation | 69-kV Loop-In | Telecommunication System Extension |
| BIO-01 | <p>A nighttime emergent bat survey will be conducted no more than five days prior to the removal of the palm trees located on the proposed Vine Substation Site. During This survey, an AnaBat System will be used to detect bat activity in the vicinity of the trees, and the trees will be visually monitored for the emergence of bats. This survey will be conducted from 30 minutes prior to sunset to 90 minutes after sunset. Following the survey, the tree removal will proceed as follows:</p> <ul style="list-style-type: none"> -If no bats are detected during the emergent survey, the trees will be removed within five days. If the trees are not removed within five days, the emergent survey will be repeated. -If bats are detected in the trees outside of the pupping season (typically April through July), emergent surveys will be repeated. If no bats are detected for two consecutive nights, the trees will be removed within five days. If the trees are not removed within five days, the emergent survey will be repeated. -If bats are detected in the trees during the pupping season, tree removal will wait until the end of pupping season and the emergent surveys will be repeated. <p>In addition to the above pre-construction survey SDG&E will perform quarterly day/night emergent surveys (one night each quarter) between now and the start of construction to confirm presence/absence of bats at each palm tree.</p> | Based on recent scientific studies and observations, several bat species have been known to utilize palm trees for roosting. A suitable prey base (in the form of insects) exists due to the abundant use of artificial nighttime lighting in the vicinity of the proposed Vine Substation site. | Yes | No | No | No |
| CUL-01 | <p>An archaeological monitor(s) familiar with the types of prehistoric and historic resources that could be encountered within the Project area will be present during ground-disturbing activities associated with the Vine Substation. In addition, an archaeological monitor(s) will be present during all trenching activities associated with the underground 12-kilovolt lines along Kettner Boulevard. In the event that cultural resources are discovered, the archaeological monitor will have the authority to divert or temporarily halt ground disturbance to allow evaluation of the potentially significant cultural resources. The archaeological monitor will contact SDG&E's Cultural Resource Specialist and Environmental Project Manager at the time of discovery. The archaeological monitor, in consultation with SDG&E's Cultural Resource Specialist, will determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities in the vicinity of the discovery are allowed to resume. For significant cultural resources, a Research Design and Data Recovery Program would be prepared and carried out to mitigate impacts. All collected cultural remains will be cleaned, cataloged, and permanently curated with an appropriate institution. All artifacts will be analyzed to identify function and chronology as they relate to the history of the area. Faunal material will be identified to the species level. If locomotive and/or electric rails are discovered during construction and fall within a recommended period of significance, and cannot be preserved in place, they will be immediately documented using standard documentation. All materials that cannot be preserved in place will be offered to the Pacific Southwest Railway Museum for preservation. If preservation is not feasible, the monitor will photograph, map and document the location of the resource and summarize the results in a Department of Parks and Recreation (DPR 523) form that will be submitted to the South Coastal Information Center (SCIC). A monitoring results report—which includes appropriate graphics and describes the results, analyses, and conclusions of the</p> | This measure ensures that ground-disturbing activities are monitored so that impacts can be mitigated through proper investigation and recovery of cultural resources. | Yes | Yes | Yes | Yes |

Table B.1-11: Applicant Proposed Measures

| APM Number | Description | Justification | Proposed Project Component | | | |
|------------|---|---|-----------------------------------|-------------------------------|---------------|------------------------------------|
| | | | Proposed Vine 69/12-kV Substation | 12-kV Distribution Relocation | 69-kV Loop-In | Telecommunication System Extension |
| | monitoring program—will be prepared and submitted to SDG&E's Cultural Resource Specialist and Environmental Project Manager following completion of the program. Any cultural sites or features encountered will be recorded on appropriate Department of Parks and Recreation forms. All forms and reports will be submitted to the SCIC at San Diego State University and to the City of San Diego Development Services Department. | | | | | |
| CUL-02 | A paleontological monitor will be on site to observe excavation operations that involve the original cutting of deposits with high paleontological resource sensitivity (i.e., Bay Point Formation) to depths greater than 3.5 feet. In the event that fossils are encountered, the paleontological monitor will have the authority to divert or temporarily halt construction activities in the area of discovery to allow the recovery of fossil remains. The paleontological monitor will 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, will determine the significance of the discovered resources. SDG&E's Cultural Resource Specialist and Environmental Project Manager must concur with the evaluation procedures to be performed before construction activities are allowed to resume. When fossils are discovered, a paleontologist (or the paleontological monitor) will recover them, along with pertinent stratigraphic data. Fossil remains collected during monitoring and salvage would be cleaned, repaired, sorted, cataloged, and deposited in a scientific institution with permanent paleontological collections. A final summary report will be completed that outlines the results of the mitigation program. The report will discuss the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils. | This measure ensures that excavation in areas containing Pleistocene-age deposits of the Bay Point Formation and Lindavista Formation are monitored so that impacts can be mitigated through proper investigation and recovery of cultural resources. | Yes | Yes | Yes | Yes |
| HAZ-01 | <p>Prior to approval of the final construction plans for the Proposed Project, a project-specific Hazardous Materials and Waste Management Plan will be prepared for the construction phase of the Proposed Project to ensure compliance with all applicable federal, state, and local regulations. The Hazardous Materials and Waste Management Plan will reduce or avoid the use of potentially hazardous materials for the purposes of worker safety, protection from groundwater contamination, and proper disposal of hazardous materials. The plan will include the following information related to hazardous materials and waste, as applicable:</p> <ul style="list-style-type: none"> ▪ A list of the hazardous materials that will be present on site during construction, including information regarding their storage, use, and transportation; ▪ Any secondary containment and countermeasures that will be required for onsite hazardous materials, as well as the required responses for different quantities of potential spills; ▪ A list of spill response materials and the locations of such materials at the Proposed Project site during construction; ▪ A list of the adequate safety and fire suppression devices for construction activities involving toxic, flammable, or exposure materials; ▪ A description of the waste-specific management and disposal procedures that will be conducted for any hazardous materials that will be used or are discovered during construction of the Proposed Project; and ▪ A description of the waste minimization procedures to be implemented during construction of the Proposed Project. | The Hazardous Materials and Waste Management Plan will reduce or avoid the use of potentially hazardous materials for the purposes of worker safety, protection from groundwater contamination, and proper disposal of hazardous materials. | Yes | | | |

Source: SDG&E, 2014 (Table 3-8); SDG&E, 2015a (APM BIO-01); SDG&E, 2015e (APM CUL-01 revised).

Project Design Features

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 Natural Community Conservation Plan (NCCP – PEA Attachment 4.4-C), and to comply with applicable environmental laws and regulations. Consistent with its existing practices, SDG&E would implement these operating restrictions as appropriate during construction, operation, and maintenance to avoid and minimize potential environmental impacts.

A description of many of the design features and ordinary construction and operating restrictions incorporated into all phases of the Proposed Project follows.

- **Safety and Environmental Awareness Program.** SDG&E would prepare a Safety and Environmental Awareness Program (SEAP) for project-personnel. The SEAP may include training for relevant topics such as:
 - General safety procedures,
 - General environmental procedures,
 - Fire safety,
 - Biological resources,
 - Cultural resources,
 - Paleontological resources,
 - Hazardous materials protocols and BMPs, and
 - Storm Water Pollution Prevention Plan (SWPPP).

The program would include a multi-level approach that is commensurate to each worker's role on the Proposed Project. Supervisors, including construction foremen, would be required to actively participate in a training session to identify the specific requirements of the Proposed Project. SDG&E crews and other staff would also be given training and a review of the Proposed Project requirements prior to the commencement of any grading or construction work.

- **Galvanized Steel Structures.** New structures would utilize galvanized steel to avoid potential adverse effects due to high moisture content in coastal areas. The dulled aspect of the galvanized steel poles would also minimize the potential for visual impacts relating to glare.
- **Aerial Marking.** SDG&E would consult with the FAA concerning aerial marking and lighting requirements for all new overhead facilities. As required, lighting and aerial marking would be added to applicable overhead facilities, including new structures. The FAA confirmed on October 8, 2014 that the proposed TSPs will not require marking or lighting. The FAA's determination is valid for 18 months, at which point SDG&E can apply for a one-time 18-month extension, if necessary (SDG&E, 2015a).
- **Construction Scheduling.** To the greatest extent practical, SDG&E would plan construction of the Proposed Project such that any potential overlap with other SDG&E projects would be coordinated such that net impacts would be minimized.

- **Hazardous Materials.** SDG&E would address potential impacts relating to the handling and use of hazardous materials through compliance with numerous state and federal regulations, including, but not limited to:
 - Federal Occupational Safety and Health Administration (OSHA) regulations for worker safety in hazardous material remediation and hazardous waste operations (29 CFR Section 1910.120),
 - Federal OSHA regulations hazard communication for workers (29 CFR Section 1910.1200),
 - Federal OSHA regulations for toxic air contaminants for workers (29 CFR Section 1910.1000),
 - CalOSHA regulations for worker safety in hazardous material remediation and hazardous waste operations (8 California Code of Regulations [CCR] 5192),
 - CalOSHA regulations for hazard communication for workers (8 CCR 5194), and
 - Department of Toxic Substances Control (DTSC) regulations implementing Resource Conservation and Recovery Act of 1976 (RCRA) and the California Hazardous Waste Control Law (HWCL) (22 CCR Division 4.5).
- **Health and Safety Plan.** SDG&E will prepare and implement a Health and Safety Plan to guide construction workers on how to properly manage any contamination discovered during construction. (SDG&E, 2014, p. 4.8-13)
- **SDG&E Subregional NCCP.** The Proposed Project would 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.
- **SDG&E Water Quality Construction BMP Manual.** SDG&E's Water Quality Construction BMPs Manual (BMP Manual – PEA Attachment 4.8-B) organizes and presents SDG&E's standard water quality protection procedures for various specific actions that routinely occur as part of SDG&E's ongoing construction, operation, and maintenance activities. The primary focus of most BMPs is the reduction and/or elimination of potential water quality impacts during construction. The BMPs described within the BMP Manual were derived from several sources including the State of California guidelines as well as the California Department of Transportation (Caltrans) Water Quality BMPs.
- **Erosion and Sediment Control and Pollution Prevention During Construction.** Projects that disturb one acre or more of soil are required to obtain coverage under the California SWRCB's General Permit for Storm Water Discharges Associated with Construction Activity Order No. 2009-0009-DWQ (Construction General Permit). To obtain coverage under the Construction General Permit, Permit Registration Documents, including a Notice of Intent, SWPPP, risk assessment, site map, certification, and annual fee, must be submitted electronically to the SWRCB, and a Waste Discharger Identification number must be assigned prior to initiating construction activities. The SWPPP would include the following:
 - Identification of pollutant sources and non-storm water discharges associated with construction activity
 - Specifications for BMPs that would be implemented, inspected, and maintained during Proposed Project construction to minimize erosion, the potential for accidental releases, and pollutants in the runoff from the construction areas (including pollutants from storage and maintenance areas, as well as laydown areas for building materials)

- Specifications for spill response and implementation
 - A record of training provided to persons responsible for implementing the SWPPP
 - Reporting and record-keeping requirements
- **Hazardous Waste and Spill Prevention.** During construction, the San Diego RWQCB would oversee and inspect for compliance with the Construction General Permit for the SWRCB. In addition, a Hazardous Materials Business Plan (HMBP) and Spill Prevention, Control, and Countermeasure Plan (SPCC) would be prepared prior to construction of the Proposed Project, and would be implemented during construction to ensure that any potential release or spill of hazardous materials is properly handled. All non-hazardous soil and grub material that would be transported off site may be disposed of at the Miramar Landfill (5180 Convoy Street, San Diego, CA), located approximately 7.2 miles northeast of the proposed Vine Substation (approximately 12.4-mile one-way trip distance [SDG&E, 2015d]). All other construction waste (i.e., refuse, spoils, trash, oil, fuels, poles, pole structures, etc.) would be disposed of properly and in accordance with all applicable federal, State, and local laws regarding solid and hazardous waste disposal.
- **Temporary Lighting.** Temporary lighting at staging and storage areas would be directed on site and away from any sensitive receptors.
- **Visual Screening of Staging Yard.** Where the proposed Vine Substation is visible to the public, opaque mesh or slats (or equivalent material) would be installed along a temporary six-foot tall construction fence that would soften the view of the site from roads, residences, and other public vantage points.
- **Materials.** Non-specular conductor and galvanized steel poles would be used in order to reduce potential glare.
- **Restoring Appearance of Temporarily Disturbed Areas.** When Proposed Project construction has been completed, all temporarily disturbed terrain would be restored, as needed and as appropriate, to approximate pre-construction conditions.
- **Soil Stabilization.** Disturbed areas must be stabilized per the SWPPP.
- **Fugitive Dust Control.** All unpaved construction areas would be watered up to two times daily during construction to reduce dust emissions and to meet SDAPCD Rule 55 requirements. SDG&E or its contractor would keep the construction area sufficiently dampened to control dust caused by construction and hauling, and would provide at all times reasonable dust control of areas subject to windblown erosion.
- **Bulk Material Transport.** All loads would be secured by covering or be sufficiently watered and use of at least two feet of freeboard to avoid carry-over. Bulk material transport will include the removal of spoils from excavation activities during remedial grading and duct bank installation, as well as the import of fill during site development activities. The bed of all trucks hauling this material will be covered with a tarp or similar material. If a cover is not used, the material will be sufficiently watered and at least two feet of freeboard will be maintained to avoid carry-over (SDG&E, 2015b).
- **Equipment Emissions.** SDG&E or its contractor would maintain and operate construction equipment to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues would have their engines turned off after five minutes when not in use. Construction activities would be phased and scheduled to avoid emission peaks, and equipment use would be curtailed during second-stage smog alerts.

- **Volatile Organic Compound (VOC) Reduction.** Low- and non-VOC-containing coatings, sealants, adhesives, solvents, asphalt, and architectural coatings would be used to reduce VOC emissions.
- **Mufflers.** Functioning mufflers would be maintained on all equipment.
- **Resident Notification.** Residents within 300 feet of the Proposed Project would receive notification of the start of construction at least one week prior to the start of construction activities within that area.
- **Construction Noise.** For locations where the Proposed Project could exceed the noise ordinances, SDG&E would meet and confer with the City of San Diego to discuss temporarily deviating from the requirements of the Noise Ordinance.
- **Standard Traffic Control Procedures.** SDG&E would implement traffic control plans to address disruption of traffic circulation during construction activities and address any safety issues. These traffic control plans would be prepared by the project engineer or contractor and subject to approval by the appropriate jurisdictional agency, such as the City of San Diego.
- **Encroachment Permits.** SDG&E would obtain the required encroachment permits from the City of San Diego for work within City streets (see Table B.1-12) and would ensure that proper safety measures are in place while construction work is occurring within and near public roadways. These safety measures include the use of flagging, proper signage, and orange cones to alert the public to construction activities near and within the roadway.

B.1.14 Permits and Approvals

The CPUC is the lead California agency for the Proposed Project. SDG&E must comply with the CPUC's GO No. 131-D Section III-B, which contains the permitting requirements for the construction of the Proposed Project. In addition to the Permit to Construct, SDG&E is required to obtain a number of other permits from federal, state, and local agencies. Table 3-11: Permit, Approval, and Consultation Requirements lists the permits, approvals, and licenses that SDG&E anticipates obtaining from jurisdictional agencies.

| Table B.1-12: Permit, Approval, and Consultation Requirements | | |
|---|---|--|
| Agency | Permit, Approval, or Consultation | Jurisdiction/Purpose |
| Federal Agencies | | |
| USFWS | Implementation of SDG&E's NCCP | Activities within NCCP coverage areas that impact biological resources (required only for review of the Proposed Project, and no approval or permit is involved) |
| State Agencies | | |
| CPUC | Permit to Construct | Overall project approval and California Environmental Quality Act (CEQA) review |
| SWRCB | National Pollutant Discharge Elimination System General Construction Permit | Storm water discharges associated with construction activities disturbing more than one acre of land |
| CDFW | Implementation of SDG&E's NCCP | Activities within NCCP coverage areas (required only for the review of Proposed Project, no approval or permit is involved) |
| Local Agencies | | |
| North County Transit District (NCTD) | Right-of-Entry permit | Access to NCTD Property during construction |
| MTS | Right-of-Entry Permit | Access to MTS property during construction |
| MTS | License Agreement | Operation and maintenance within, under, or over a railroad ROW. |
| Burlington North Santa Fe (BNSF) Railway | Temporary Occupancy Agreement | Access to BNSF property during construction |

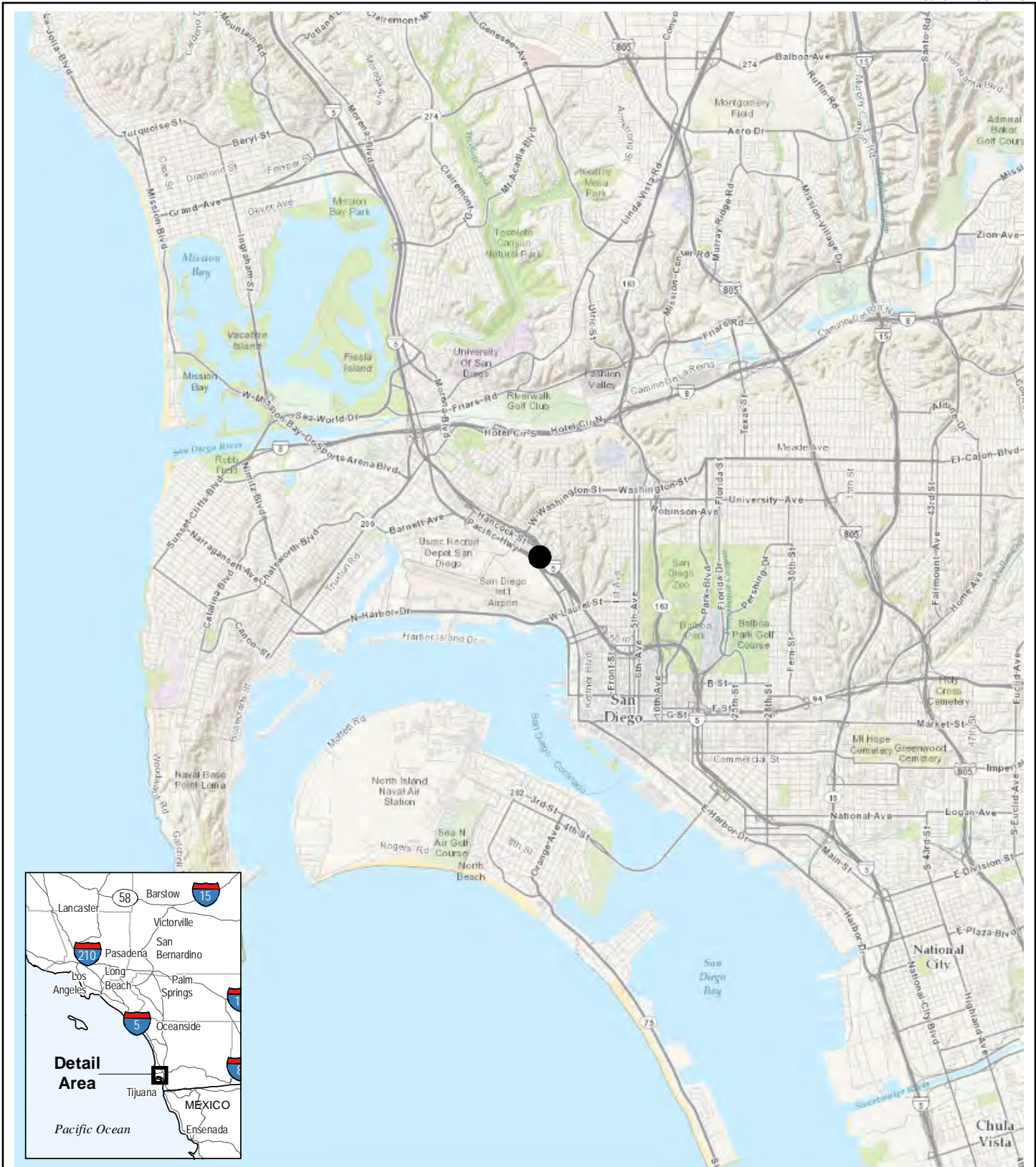
| Table B.1-12: Permit, Approval, and Consultation Requirements | | |
|---|--|---|
| Agency | Permit, Approval, or Consultation | Jurisdiction/Purpose |
| BNSF Railway | Utility Agreement License | Operation and maintenance, within, under, or over a railroad ROW |
| City of San Diego | Encroachment Permit | Construction, operation, and maintenance within, under, or over city or county road ROW |
| City of San Diego | Grading Permit | On-site grading activities |
| City of San Diego | Noise Abatement and Control Administrator Permit | For work occurring after 7:00 p.m. |
| City of San Diego | Traffic Management Plan | SDG&E will submit the plan to the City of San Diego prior to construction and will abide by the requirements set forth in the permit as it pertains to ingress and egress routes. |

Source: SDG&E, 2014 (Table 3-7), 2015a.

Right of Way Requirements

As described previously, SDG&E currently owns the approximately 1.5-acre parcel on which the proposed Vine Substation would be constructed; therefore, no new ROW would be required to install this Proposed Project component. Because the new and relocated 12-kV distribution circuits and underground portions of the telecommunication system extension would be placed entirely within City of San Diego public streets, they would occupy the franchise position and no new ROW would be obtained. SDG&E would obtain a License Agreement from MTS for the approximately 80 feet of new, approximately 320-foot-wide ROW for the overhead 69-kV loop-in conductors. The remainder of the 69-kV loop-in would be installed within the franchise position of City of San Diego public streets.

PROJECT DESCRIPTION FIGURES



● Project Location

Source: SDG&E, 2014

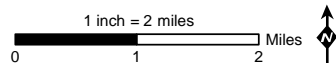


Figure B.1-1: Project Location Map

Vine Substation Project
B.1 PROJECT DESCRIPTION



- | | | |
|-------------------------------------|---------------------------------------|---|
| Proposed Vine 69/12 kV Substation | Existing 69 kV Overhead | Proposed 12 kV Duct Bank |
| Existing Kettner Substation | Existing 69 kV Overhead to be Removed | Proposed 12 kV and Telecommunications Duct Bank |
| Proposed Optional 12 kV Realignment | Proposed 69 kV Overhead | Proposed Telecommunications Duct Bank |
| | Existing 12 kV Duct Bank | |

Source: SDG&E, 2015f

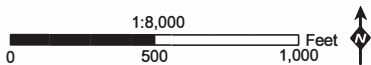


Figure B.1-2: Project Overview Map



Figure B.1-3a: Detailed Project Components

Vine Substation Project
B.1 PROJECT DESCRIPTION





Figure B.1-3c: Detailed Project Components

Vine Substation Project
B.1 PROJECT DESCRIPTION



Figure B.1-3d: Detailed Project Components



Figure B.1-3e: Detailed Project Components



Figure B.1-3f: Detailed Project Components



Figure B.1-3g: Detailed Project Components

Vine Substation Project
B.1 PROJECT DESCRIPTION



Figure B.1-3h: Detailed Project Components



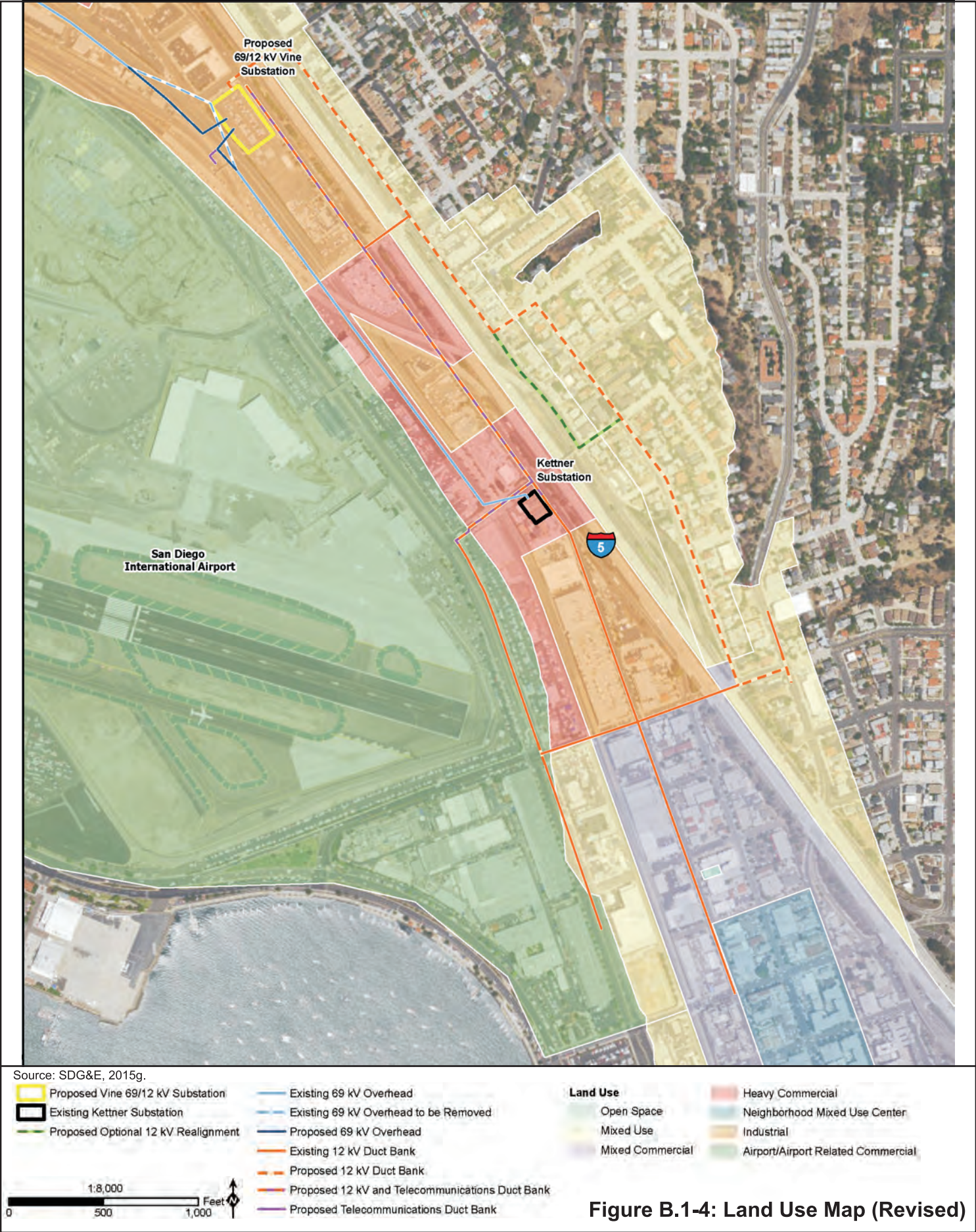
Figure B.1-3i: Detailed Project Components

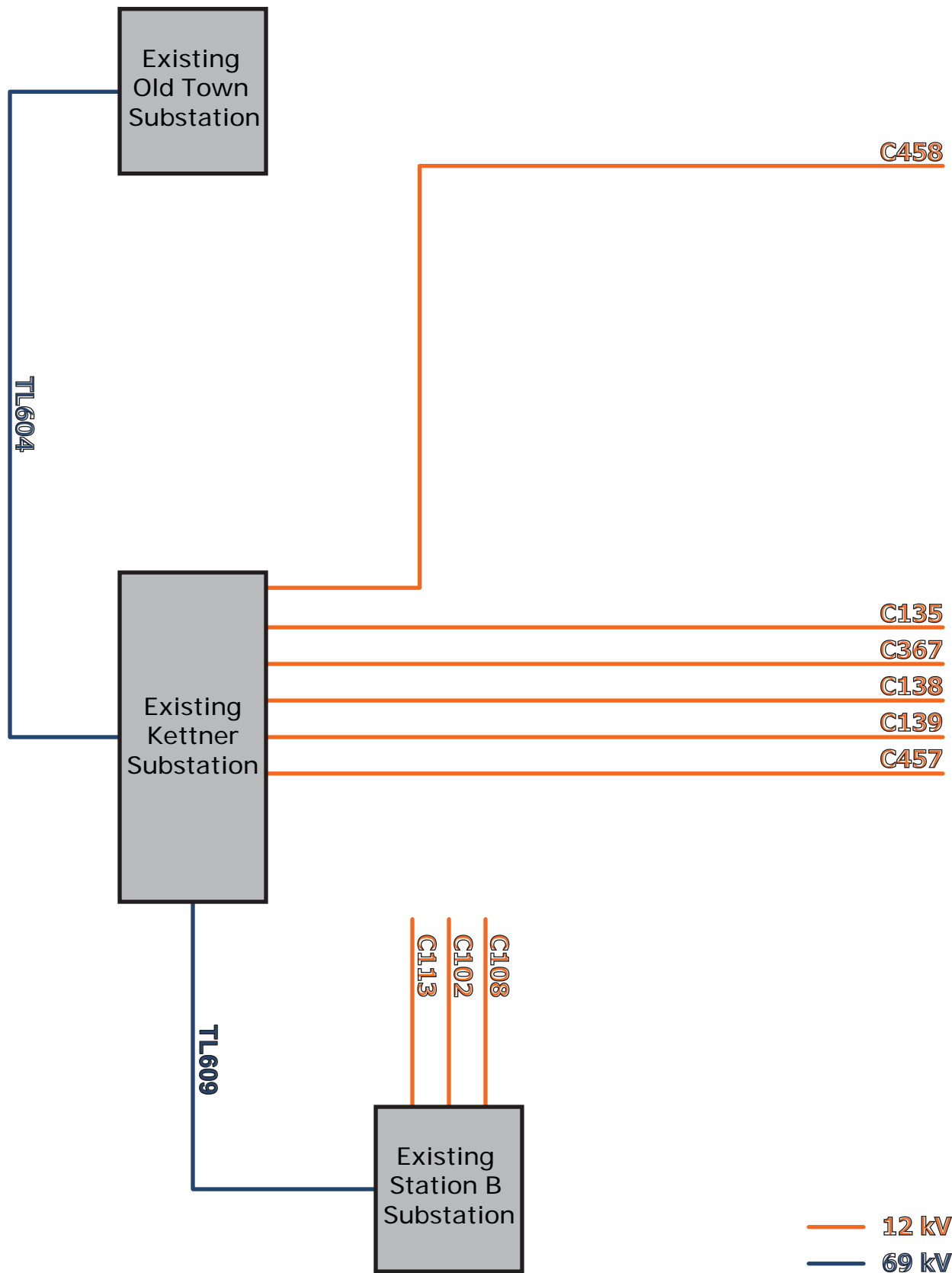
Vine Substation Project
B.1 PROJECT DESCRIPTION



Figure B.1-3j: Detailed Project Components

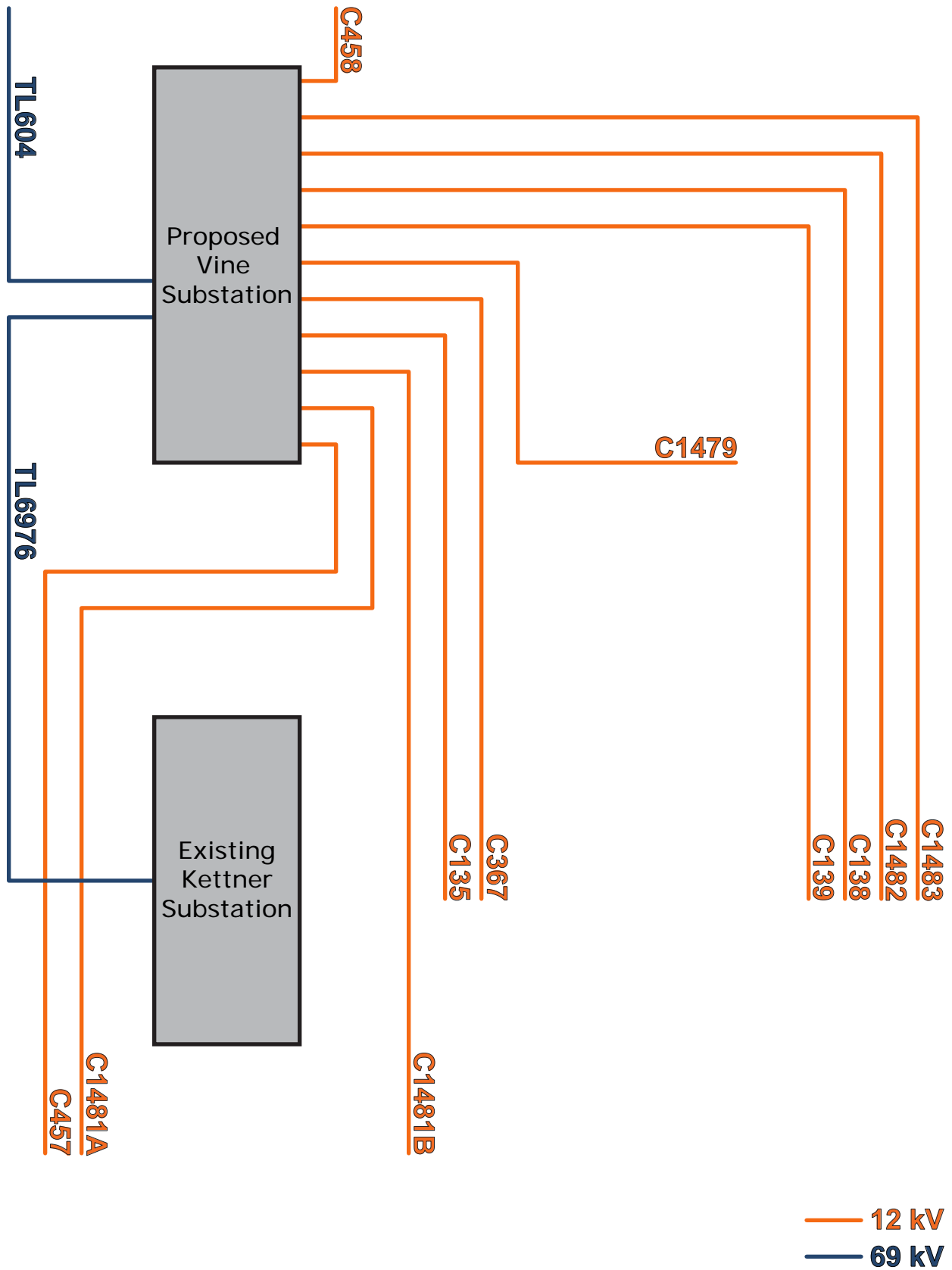






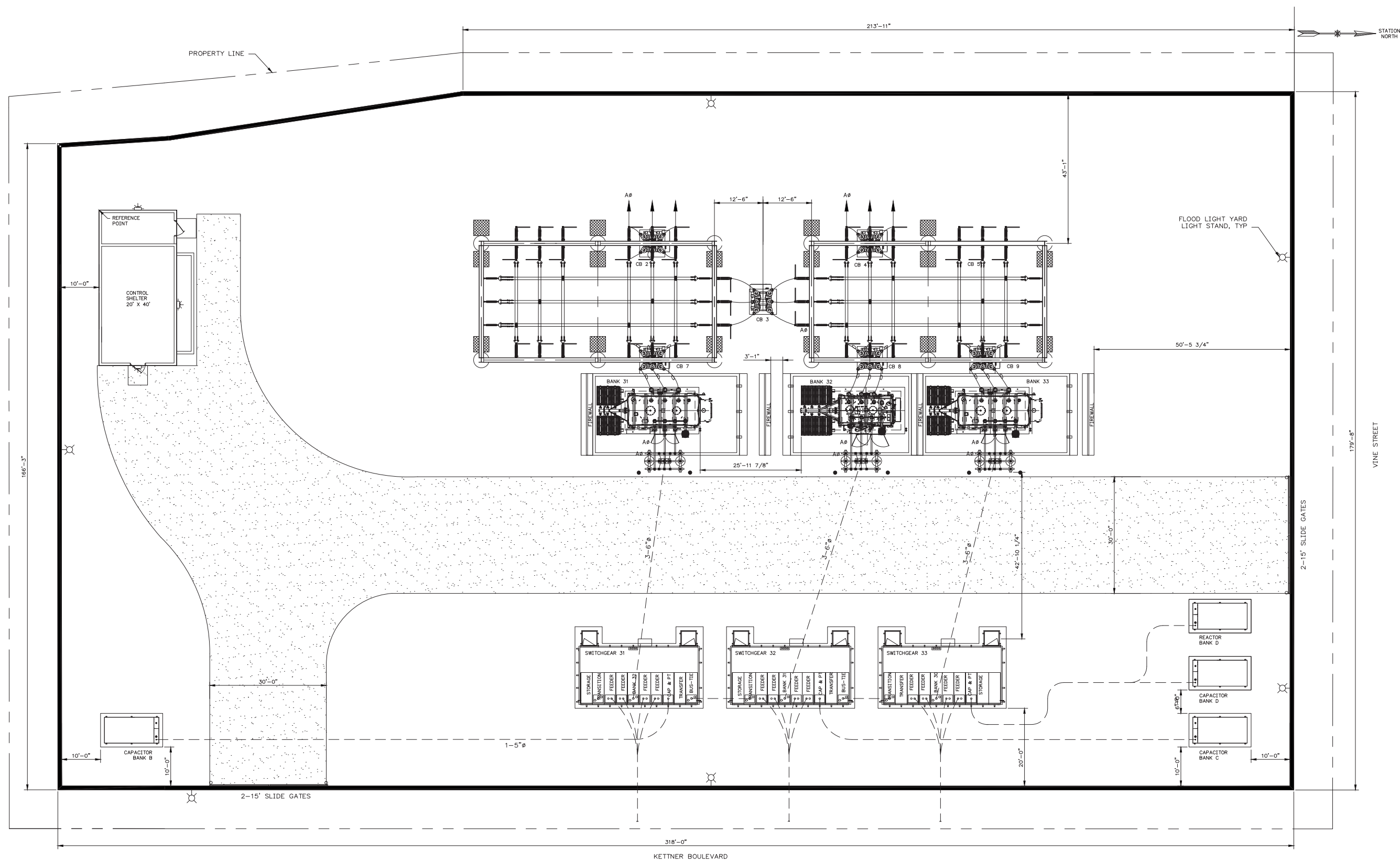
Source: SDG&E, 2015b

Figure B.1-5: Existing System Configuration

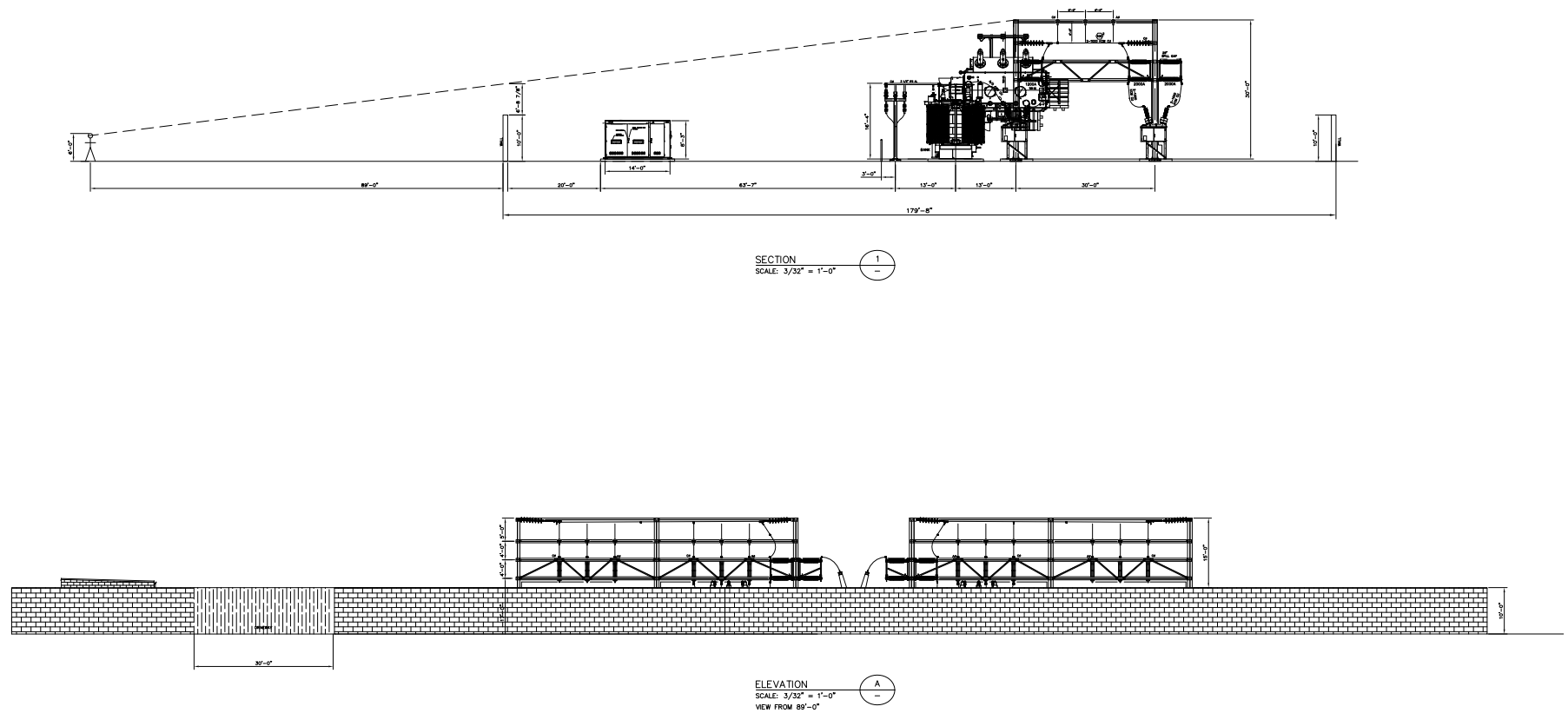


Source: SDG&E, 2015b

Figure B.1-6: Proposed System Configuration

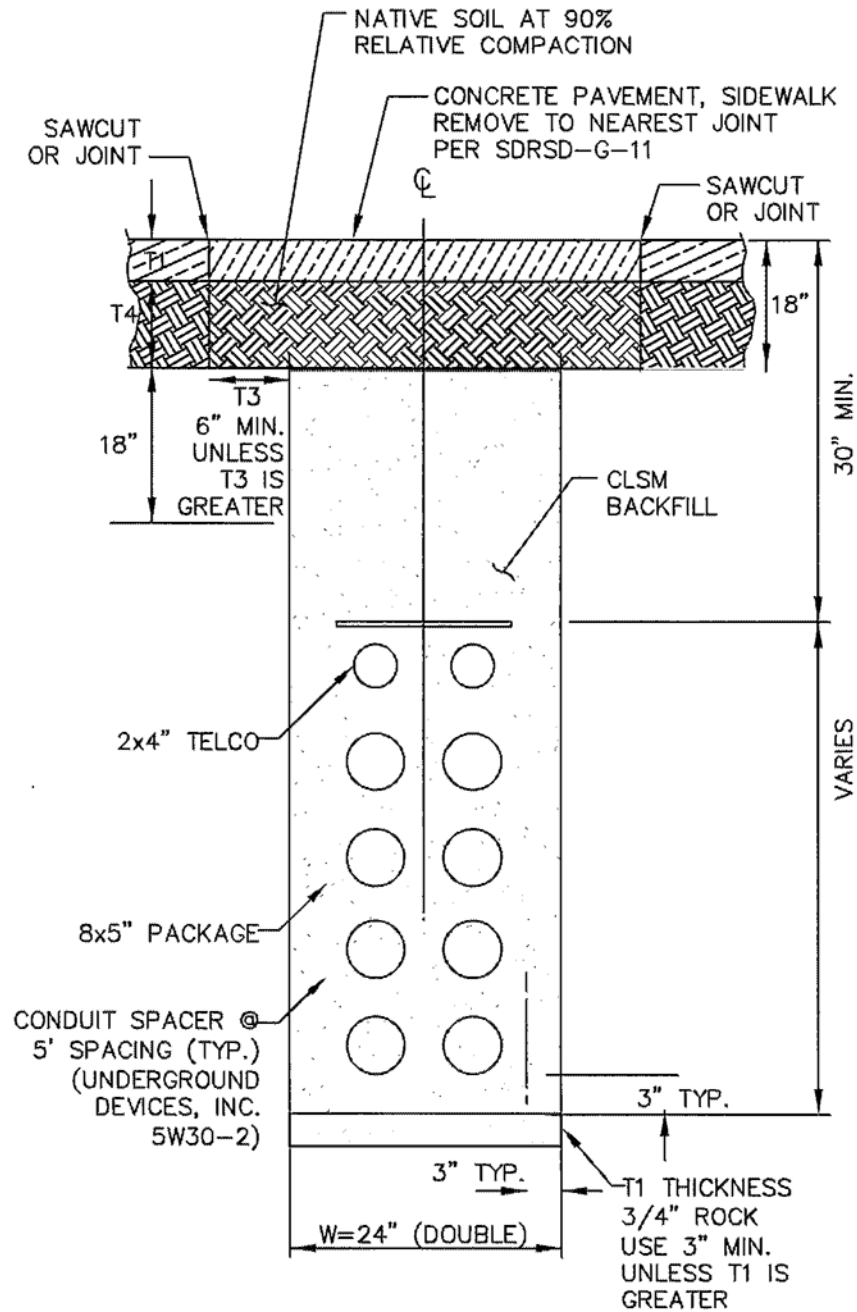






Source: SCG&E, 2015a

Figure B.1-9: Vine Substation Profile View

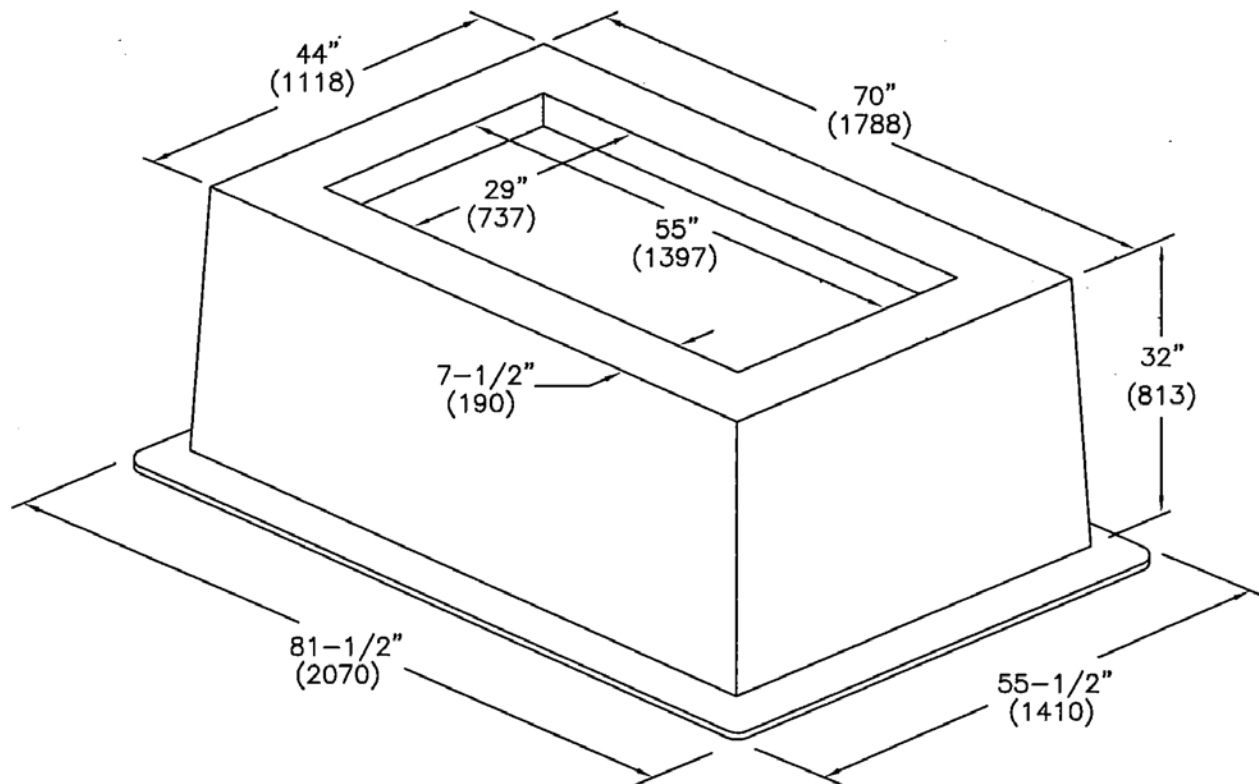


DETAIL 0

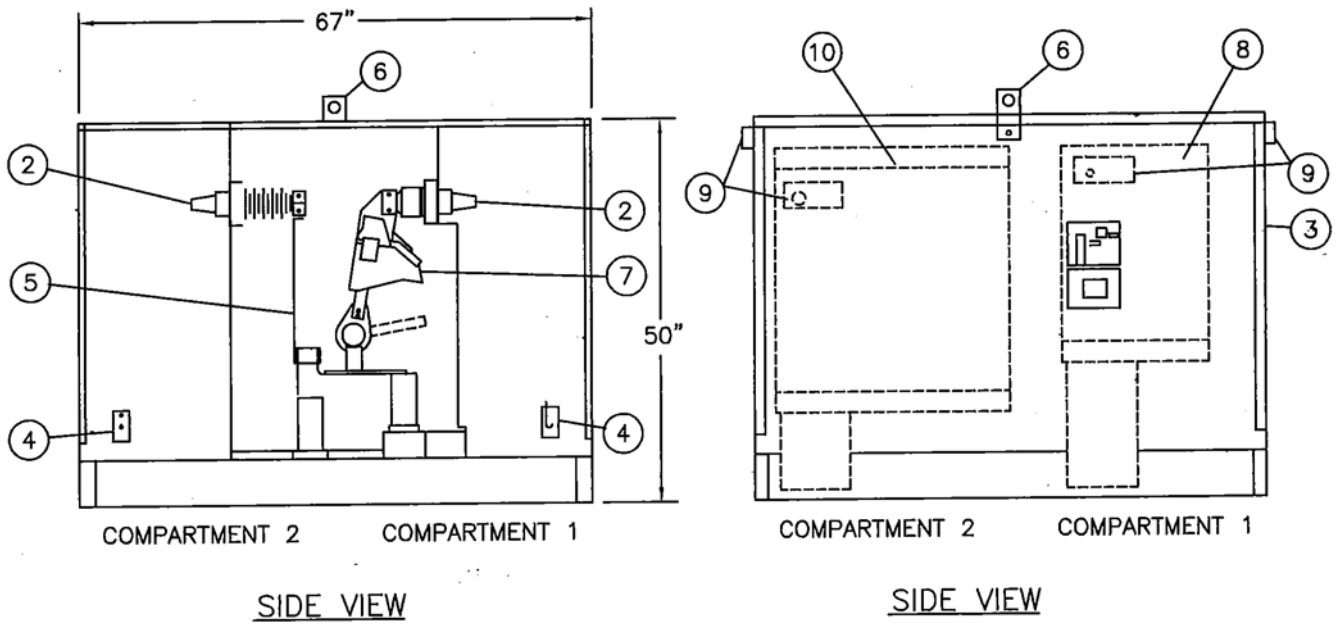
ASPHALT THICKNESS ENCOUNTERED IN THE
POTHOLING VARIED BETWEEN x & x" THICK,
UNDERLYING CONCRETE FOUND APPROXIMATELY x & x" THICK.

January 2016

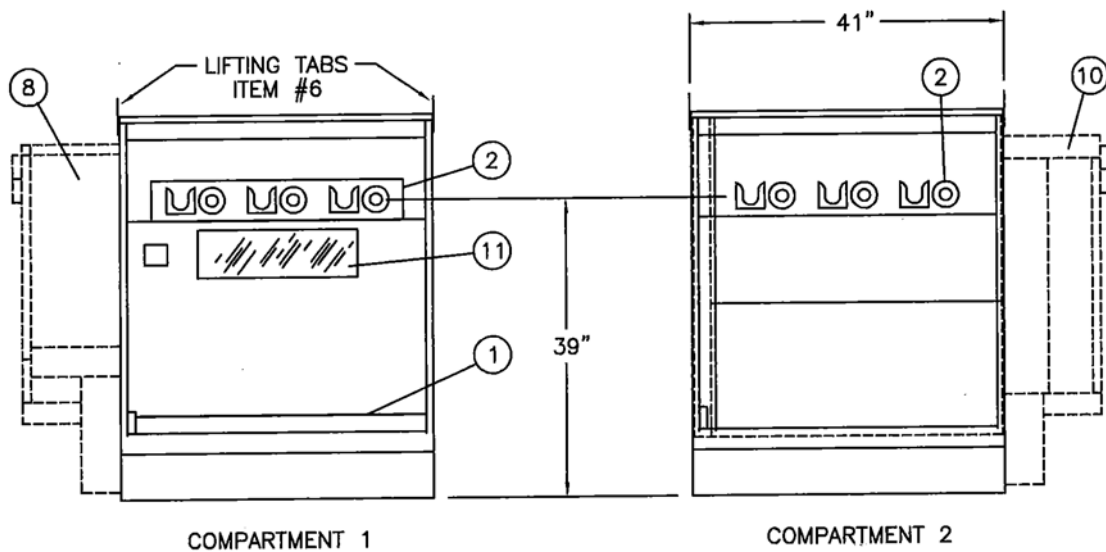
WEIGHT: 195 LB (88 KG)
DIMENSIONS 70" X 44" X 32" (1778 X 1118 X 813)



APPEARANCE AND DIMENSIONS MAY VARY SLIGHTLY
BETWEEN MANUFACTURERS



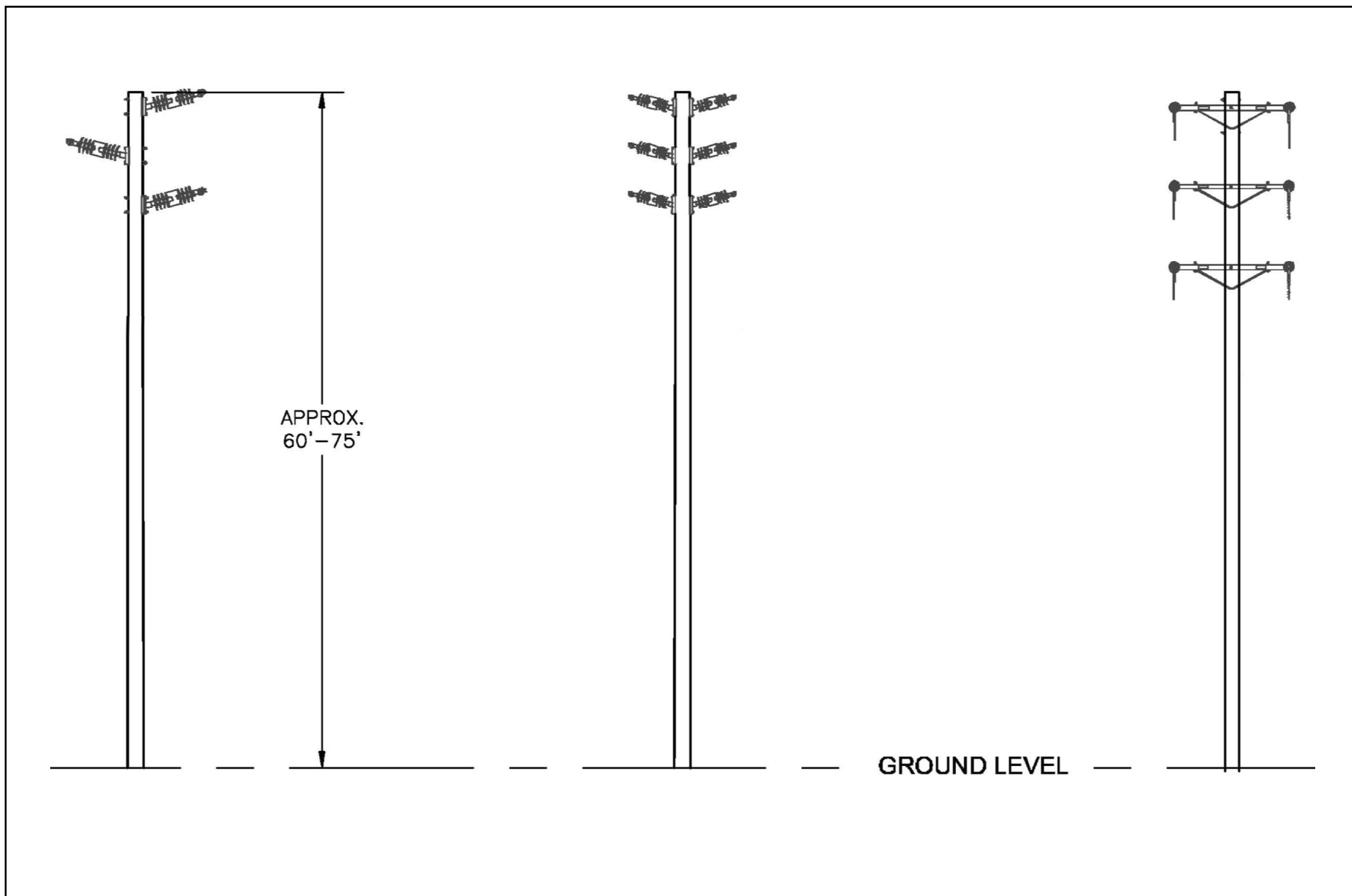
WEIGHT: 1040# MAX.



Source: SDG&E, 2014

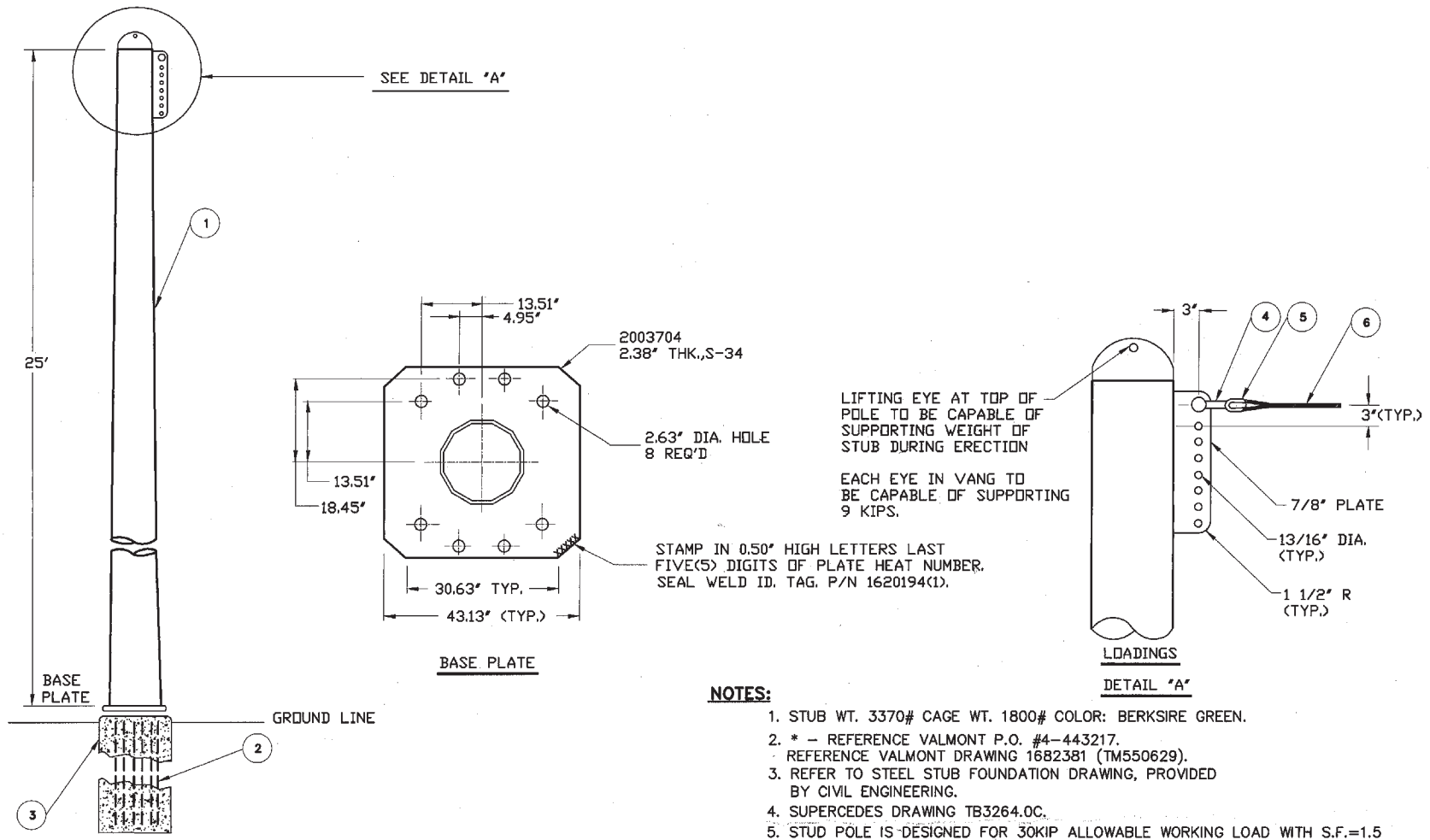
Figure B.1-13: Typical 12-kV Switch





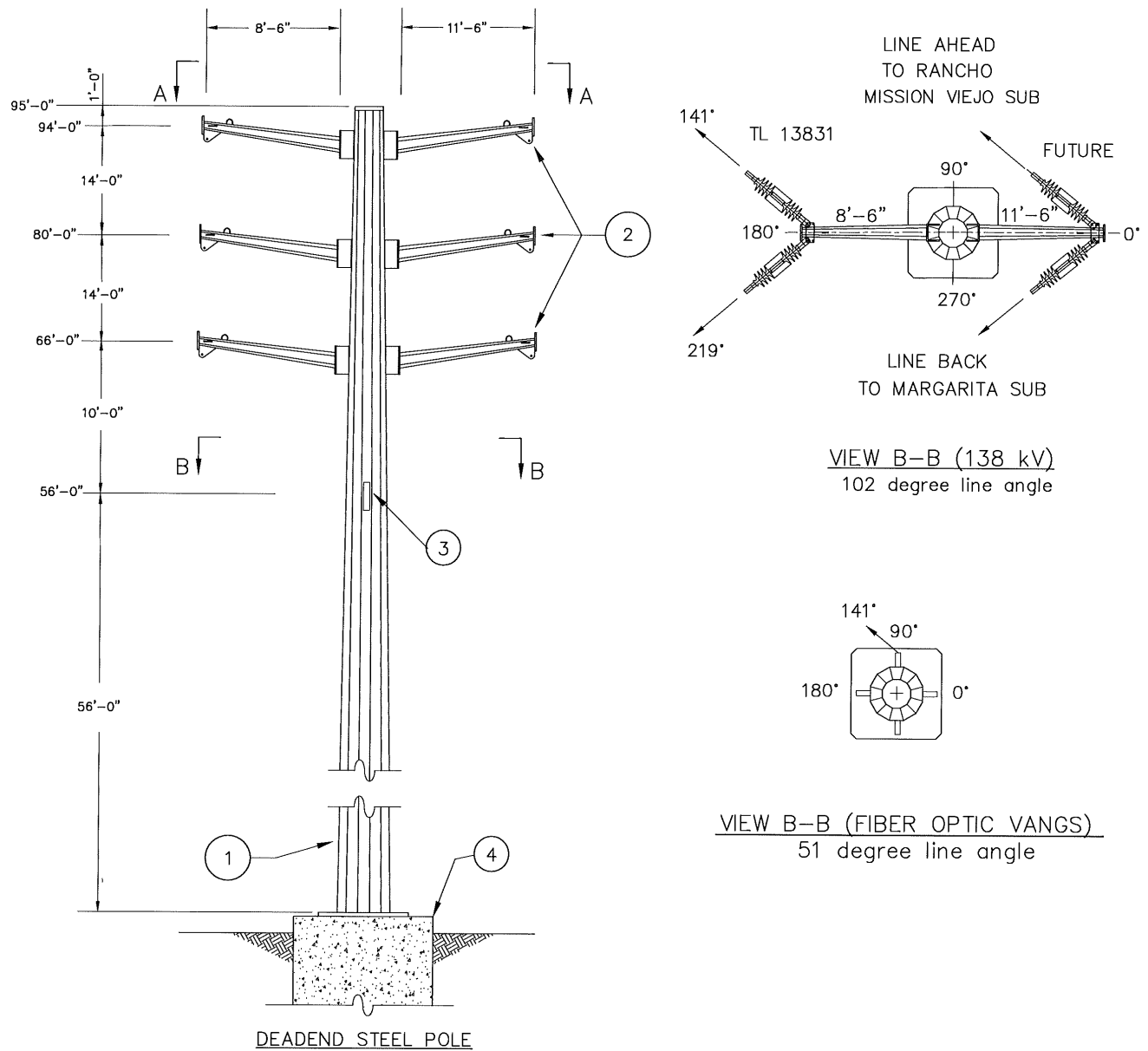
Source: SDG&E, 2014

Figure B.1-15: Typical Existing 69-kV Wood Pole



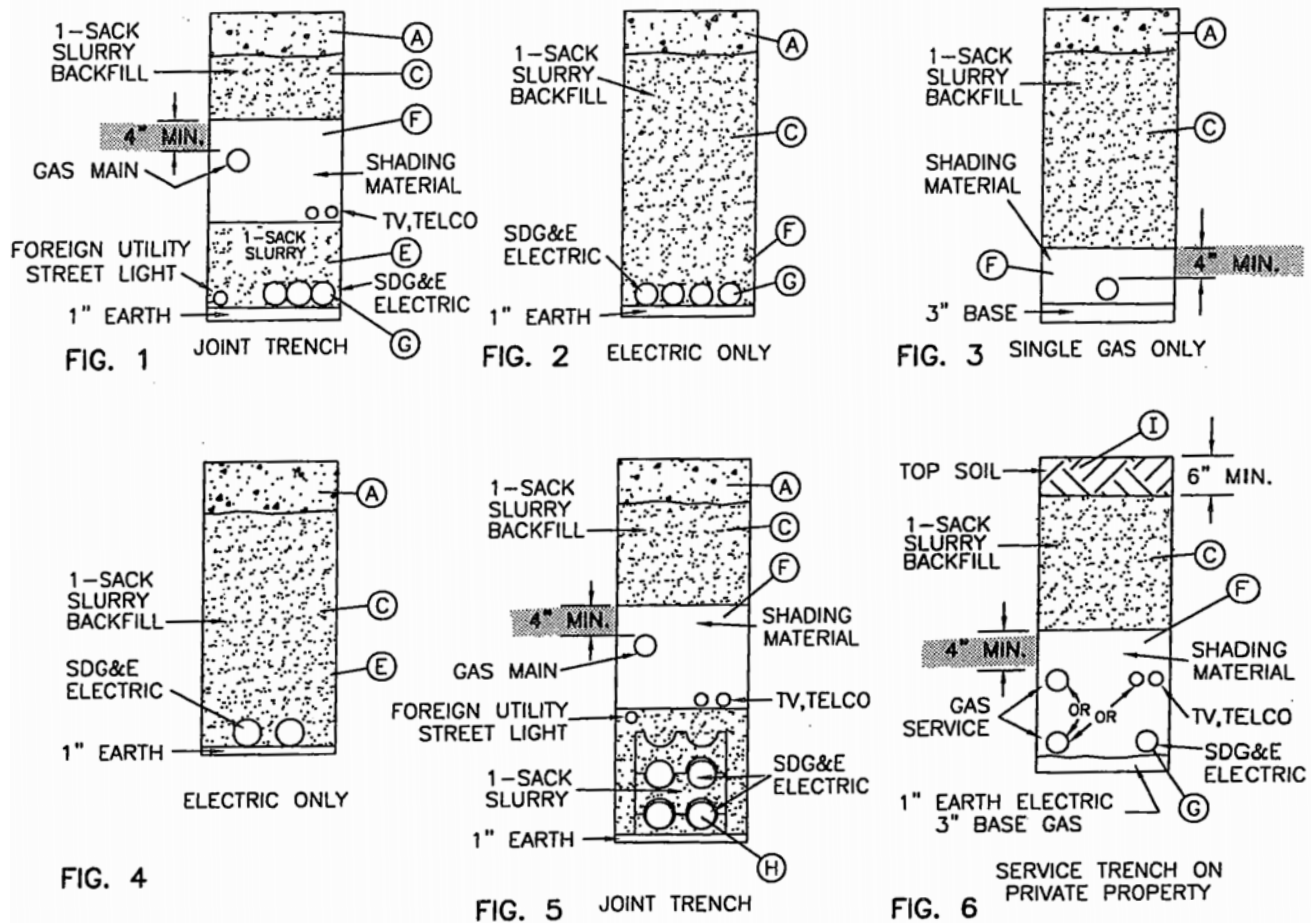
Source: SDG&E, 2014

Figure B.1-16: Typical Existing Stub Guy Pole



Source: SDG&E, 2014

**Figure B.1-17: Typical Proposed 69-kV
.....Tubular Steel Pole**

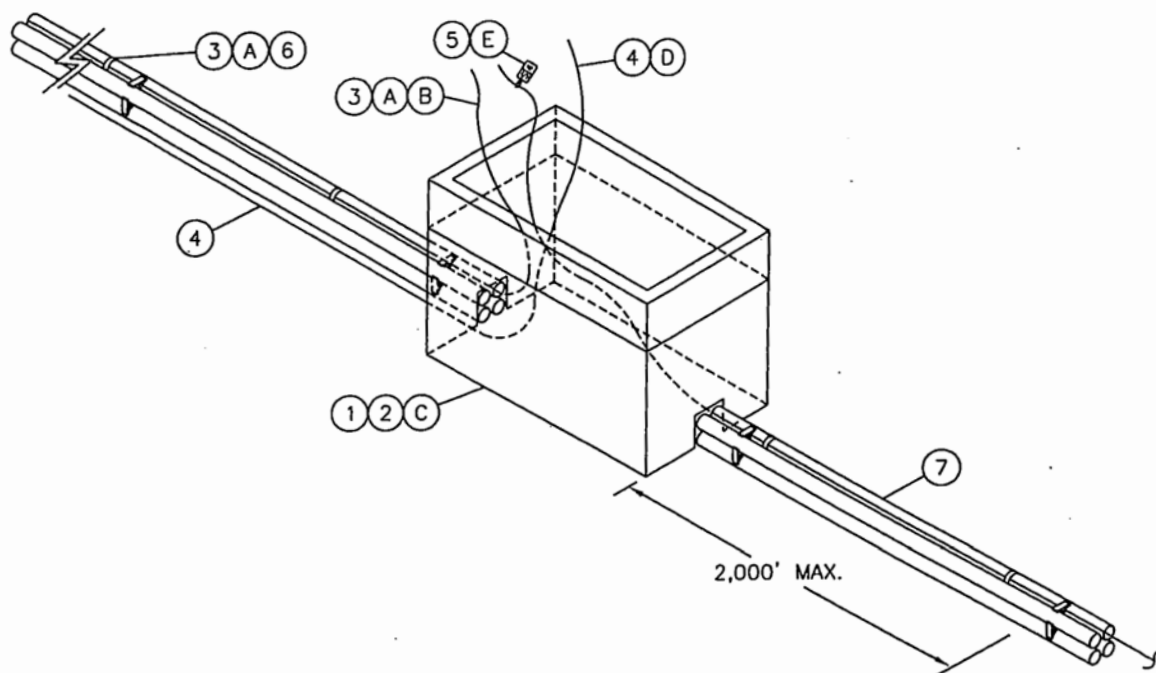


INSTALLATION:

- (A) ALL TRENCH RESURFACING SHALL BE DONE ACCORDING TO GOVERNMENTAL AGENCIES REQUIREMENTS.
- B. SHADING MATERIAL SHALL MEET GAS STANDARD 7405 OR UNDERGROUND 3370/3371 SPECIFICATIONS AND MUST BE APPROVED BY AN SDG&E AUTHORIZED INSPECTOR.
- (C) BACKFILL MATERIAL SHALL MEET THE GOVERNMENTAL (PERMITTING) AGENCIES REQUIREMENTS AND SDG&E STANDARDS. THE SAND USED FOR THE ONE SACK SLURRY OR TWO SACK, IF REQUIRED BY GOVERNMENTAL AGENCIES, MUST MEET THE CONCRETE SAND SPECIFICATION LISTED IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK) AND CONTAIN NO GRAVEL. SLURRY MUST BE FIRM BEFORE A PAVEMENT CONCRETE CAP IS INSTALLED. SLURRY IS TYPICALLY USED FOR BACKFILLING AROUND SUBSTRUCTURES, UNDER EQUIPMENT PADS, FOR TRENCHES IN EXISTING PAVED AREAS, AND UNDER CONCRETE OR PAVED DRIVEWAYS.

IT MAY NOT BE APPROPRIATE TO USE ONE SACK SLURRY UNDER THE THE FOLLOWING CIRCUMSTANCES:

- GOVERNMENTAL AGENCIES DO NOT ALLOW ONE SACK OR MAY REQUIRE TWO SACK SLURRY BACKFILL.
- INACCESSABILITY OF CONCRETE TRUCKS DELIVERING SLURRY.
- WHEN SLURRY IS NOT COST EFFECTIVE.
- NEW RESIDENTIAL SUBDIVISIONS, SINGLE FAMILY RESIDENCE SERVICE TRENCH
- SHALLOW WELD HOLES, POT HOLES, ETC.

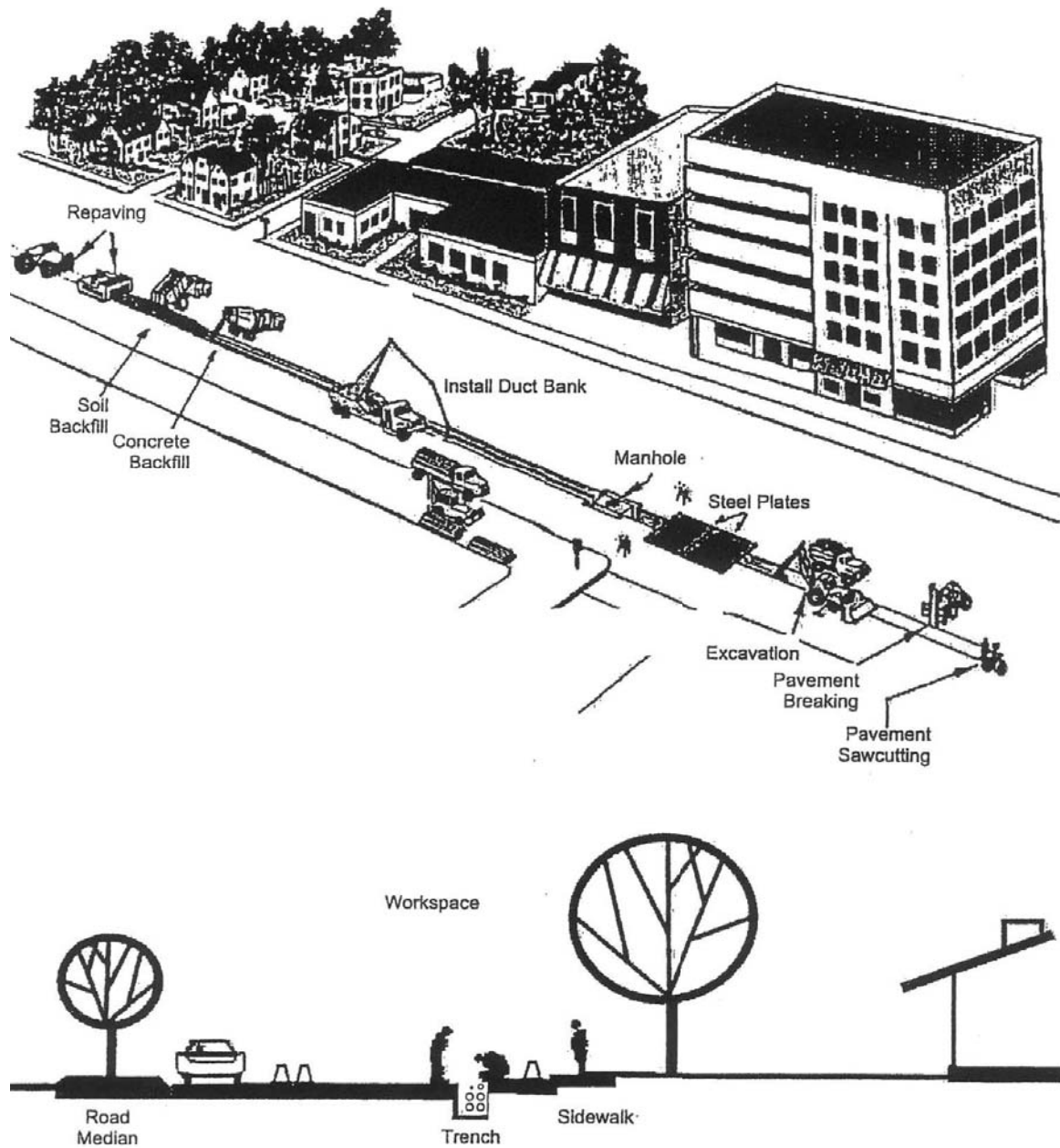


NOTE:

- THIS STANDARD APPLIES TO ALL FIBER OPTIC CONDUIT INSTALLATIONS.
- REFER TO THE SPECIFIC TRANSMISSION PROJECT FOR INSTRUCTIONS ON THE USE OF TRACER WIRE IN THE TRANSMISSION TRENCH.

II. ALLATION:

- (A) YELLOW TRACER WIRE SHALL BE INSTALLED IN THE TRENCH ALONGSIDE CONDUIT WHICH IS DESIGNATED FOR FIBER OPTIC CABLE. THE WIRE SHALL BE TAPED TO THE CONDUIT 8 TO 10 FOOT INTERVALS.
- (B) THE TRACER WIRE SHALL BE LOOPED INSIDE THE HANDHOLE WITH ENOUGH SLACK TO EXTEND 12" BEYOND THE TOP OF THE BOX. CUT THE TRACER WIRE, SEAL AND TAPE THE ENDS.
- (C) LOCATE ACCESS POINTS (HANDHOLES) TO THE TRACER WIRE AT 2000' INTERVALS.
- (D) EXTEND GROUND WIRE 12 INCHES BEYOND THE TOP OF BOX.
- (E) ATTACH AN "S4" TAG TO ALL TRACER WIRE AT ACCESS POINTS.



Source: SDG&E, 2014

Figure B.1-20: Typical Underground Construction Process within Roadways



A. Typical 12-kV Trench



B. Typical 12-kV Duct Bank

Source: SDG&E,2015b

Figure B.1-21
Typical 12-kV Underground Installation Photographs



C. Typical Type 3327 Vault

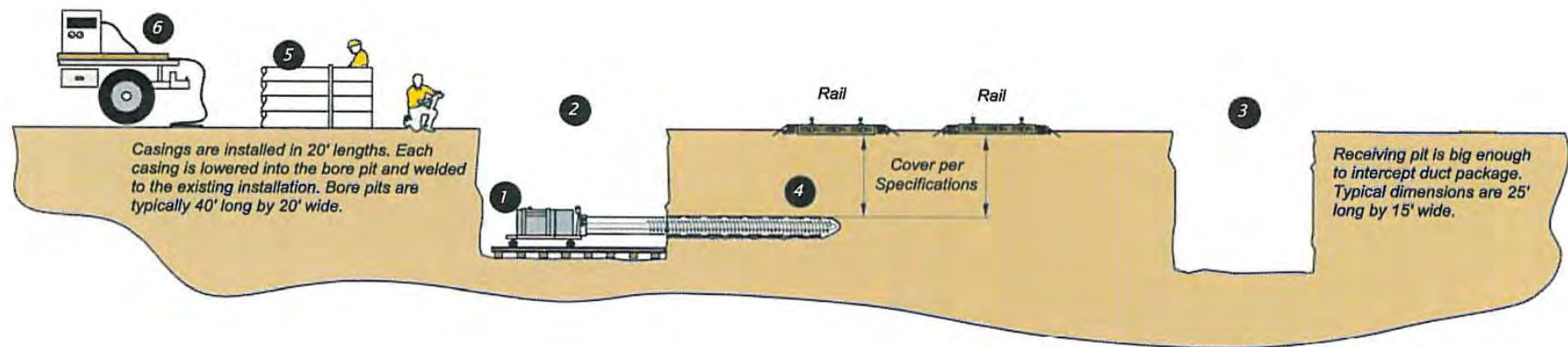


D. Typical Vault Installation

Source: SDG&E,2015b

Figure B.1-22

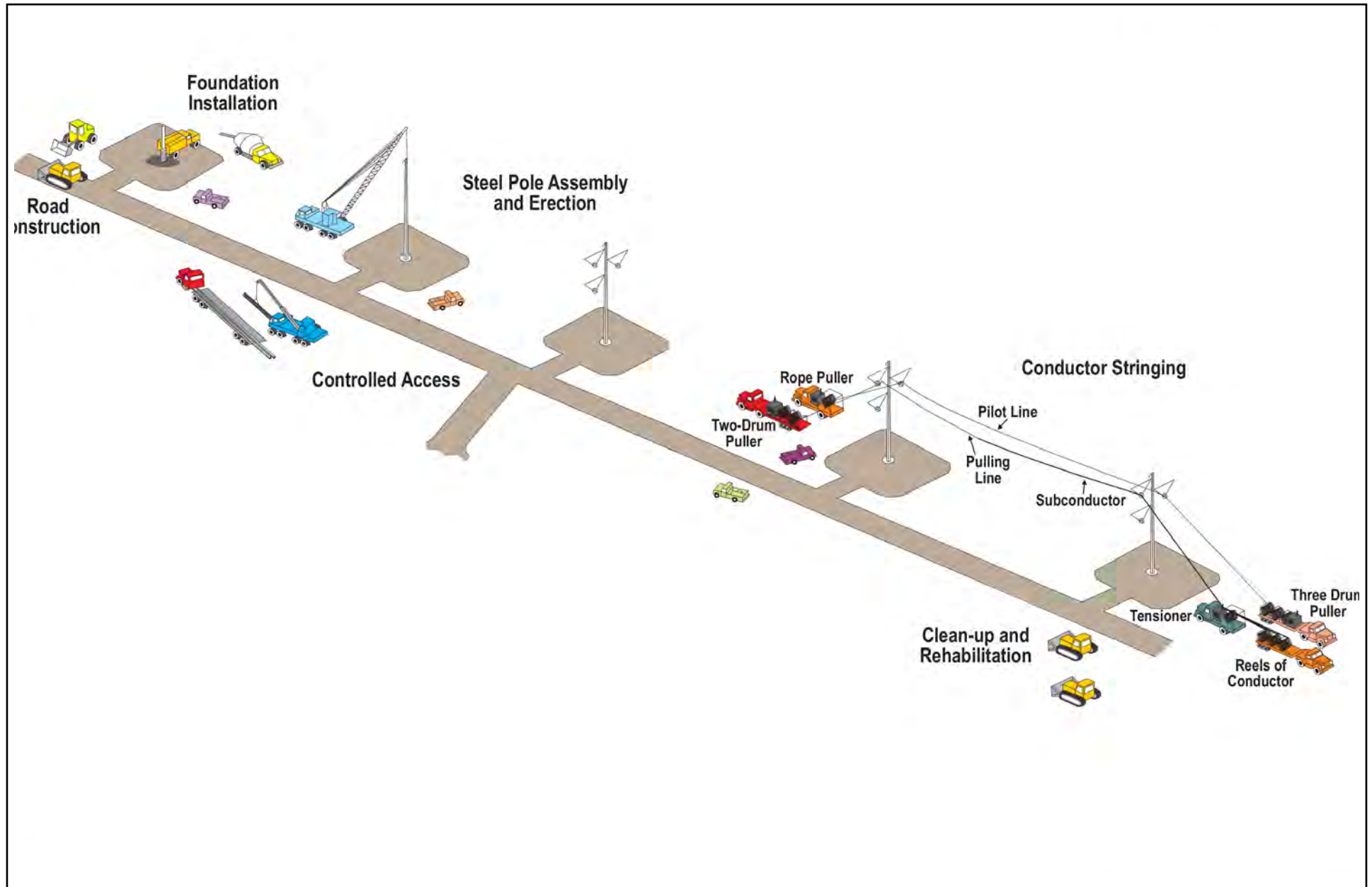
Typical Type 3327 Vault and Installation Photographs



- | | | | |
|---|---------------------|---|--------------------------------------|
| 1 | Jack & Bore Machine | 4 | Carrier Pipe (Casing) |
| 2 | Bore Pit | 5 | Carrier Stock Pipe (Casing Sections) |
| 3 | Receiving Pit | 6 | Welding Machine |

Source: SDG&E, 2015b

Figure B.1-23: Typical Jack-and-Bore Installation



Source: SDG&E, 2014

Figure B.1-24: Typical Overhead Conductor Installation



ENVIRONMENTAL MINOR PROJECT CHANGE FORM

Project Name: _____ Request Prepared By: _____

Date Approval Required: _____ Variance Request No: _____

Date Submitted: _____ Location: _____

Landowner: _____ Landowner Parcel Number: _____

Current Vegetative Cover/Land Use: _____

Existing Sensitive Resource? ☐ NO ☐ YES Specify: _____

Modifying (Check as many as apply):
☐ MITIGATION MEASURE ☐ PLAN /PROCEDURE ☐ SPECIFICATION
☐ DRAWING ☐ PERMIT CONDITION ☐ OTHER

Specify Source (e.g., Mitigation Measure B.5): _____

Description of Change and Justification: (Attach additional sheets if needed.)

Attachments: ☐ PHOTO ☐ CONSTRUCTION DRAWING ☐ ADDITIONAL ENVIRONMENTAL ANALYSIS ☐ CORRESPONDENCE ☐ OTHER : _____

Resources:

Biological ☐ NO SENSITIVE RESOURCES PRESENT ☐ SENSITIVE RESOURCES PRESENT ☐ N/A

New Survey Report Attached: ☐ YES ☐ NO

If No, Previous Biological Survey Reference: _____

Cultural ☐ NO RESOURCES PRESENT ☐ RESOURCES PRESENT WITHIN PROJECT APE : ☐ YES ☐ NO
☐ N/A (PAVED /GRAVEL AREA AND NO GROUND DISTURBANCE)

If in APE, Previous Cultural Survey Report Reference: _____

If not in APE, attach new survey report.

Other Potential Impacts: (Check any potential changes to permitted impacts and provide details below.
Attach additional sheets if needed.)

- | | | |
|---|--|--|
| <input type="checkbox"/> AIR QUALITY | <input type="checkbox"/> LAND USE | <input type="checkbox"/> TRAFFIC |
| <input type="checkbox"/> BIOLOGICAL RESOURCES | <input type="checkbox"/> NOISE | <input type="checkbox"/> VISUAL |
| <input type="checkbox"/> CONTAMINATED SOILS | <input type="checkbox"/> PALEO RESOURCES | <input type="checkbox"/> WATER RESOURCES |
| <input type="checkbox"/> CULTURAL RESOURCES | <input type="checkbox"/> SOCIOECONOMIC | <input type="checkbox"/> WETLANDS |
| <input type="checkbox"/> HAZARDOUS MATERIALS | <input type="checkbox"/> STORM WATER (SWPPP) | |

CEQA and Permitting: (Provide details for any "Yes" answer and attach additional information if needed.)

1. Will modification involve substantial changes that will require major changes to the CEQA document?
☐ YES ☐ NO
2. Will modification result in new significant environmental effects or a substantial increase in the severity of previously identified impacts? ☐ YES ☐ NO
3. Additional agency notifications and/or permit modifications required? ☐ YES ☐ NO

Conditions of Approval or Reasons for Denial: (Attach additional information if needed.)

SDG&E Required Signatures: (Attached email approvals may be used in lieu of signatures.)

SDG&E Chief Construction Inspector or Foreman: ☐ VARIANCE MODIFICATION IS NEEDED FOR SAFE AND EFFICIENT CONSTRUCTION
Name: _____ Signature: _____ Date: _____

Environmental Inspector: ☐ FIELD REVIEW COMPLETE
Name: _____ Signature: _____ Date: _____

SDG&E Land Agent: ☐ CONSISTENT WITH EXISTING RIGHTS ☐ NEW RIGHTS OBTAINED
Name: _____ Signature: _____ Date: _____

SDG&E Environmental Compliance Lead: ☐ APPROVED ☐ APPROVED WITH CONDITIONS (SEE CONDITIONS ABOVE) ☐ DENIED
Name: _____ Signature: _____ Date: _____

ATTACHMENT C
TEMPORARY EXTRA WORK SPACE (TEWS) REQUEST

Project Name

TEWS Location/Address

City/County

Proposed Use of Site

Proposed Date(s) of Use

Proposed Hours of Use

Adjacent Land Uses

SDG&E Environmental Compliance Lead (Prepared by)

Date

Biological, Cultural and Paleontological reconnaissance surveys are mandatory for use of any areas containing vegetation, or exposed earth that have not been previously surveyed and fully described in project documents. Biological surveys are mandatory for all temporary extra work sites. Attach a diagram of the proposed area that identifies the location of the site and proximity to sensitive resources or receptors.

Complete the environmental checklist below. Note: **Yes** answers require additional clarification and should be submitted as an attachment to this form.

ATTACHMENT C
TEMPORARY EXTRA WORK SPACE (TEWS) REQUEST

| Environmental Checklist | Yes* | No | CPUC Verified |
|---|------|----|------------------|
| Air Quality: Would equipment be on site or idled for more than 10 minutes? Would there be dust-producing activities? | | | |
| Biological Resources: Would use of the site result in potential impacts to sensitive biological resources? Would use of the site result in potential for the spread of noxious weeds? | | | |
| Cultural/Paleontological Resources: Would clearing or grading be required? | | | |
| Water Resources: Would runoff from the site flow into storm drains or a waterway? Would equipment refueling or maintenance be performed? Would materials block/impact storm drains or gutters? | | | |
| Land Use and Recreation: Would use of site block access to local land uses and recreational areas? | | | |
| Noise: Are noise-sensitive receptors adjacent to the site? (e.g., homes, schools, care facilities, hospitals, churches convalescent homes, parks, recreational areas) | | | |
| Socioeconomics: Would access to business be blocked? Would there be disruption of business operations? | | | |
| Traffic: Would parking be eliminated? Would increased construction traffic result in impacts? Is the site a residential area? | | | |
| Visual: Would lights at site create glare for adjacent land uses (including roadways)? | | | |

Standard Conditions of Approval

- The CPUC, via its designated Environmental Monitor, will review and approve/deny the Temporary Extra Workspace Request (TEWS) request within four business days of receiving this completed form.
- Use of TEWS is limited to 60 days. First proposed date of use: _____
- Use of TEWS shall be in compliance with local ordinances (including traffic/noise) and mitigation measures.
- If any signs of cultural resources are identified, work shall cease immediately and the site shall be reevaluated.
- The proposed site shall not be used for storage of fuel or hazardous materials.
- All drips, leaks, and/or spills from vehicles and/or equipment shall be cleaned-up immediately and disposed of in appropriate, labeled containers.
- Adjacent streets shall be swept or cleaned with water at the end of each workday if visible soil material is carried on them.
- No parking or storage of vehicles (including personnel vehicles), equipment, pipe, or any other project-related item shall be allowed on adjacent roadways.
- If a complaint is received, it shall be forwarded to the SDG&E Environmental Compliance Lead and the CPUC Environmental Monitor for review.

The following signatures indicate that the proposed site is approved for TEWS. On a random basis, a CPUC Environmental Monitor will verify that use of the proposed site is in accordance with the conditions noted. This approval may be revoked at any time by any one of the approval team. Failure to comply with all conditions will result in immediate revocation of this TEWS approval.

| | |
|----------------|------|
| Property Owner | Date |
|----------------|------|

| | |
|--------------------|------|
| SDG&E Construction | Date |
|--------------------|------|

| | |
|-------------------------------------|------|
| SDG&E Environmental Compliance Lead | Date |
|-------------------------------------|------|

The above TEWS request and attached documentation have been reviewed and this request is _____ approved or _____denied (*X one*).

| | |
|----------------------------|------|
| CPUC Environmental Monitor | Date |
|----------------------------|------|

Additional CPUC Conditions of Approval

(CPUC Monitor Initial _____)

REASON(S) FOR DENIAL: