1.0 Background Information

1.1 Project Title

Triton Substation Project (the project)

1.2 Lead Agency Name and Address

California Public Utilities Commission (CPUC)
Director, Energy Division
505 Van Ness Avenue, Fourth Floor
San Francisco, California 94102-3298

1.3 Lead Agency Contact Person and Phone Number

Iain Fisher, CPUC Project Manager
(415) 355-5580

1.4 Project Location

The project would be located in the Cities of Temecula and Murrieta and unincorporated areas of Riverside County, California (Figure 1-1). The proposed Triton Substation site is on the southeast corner of Nicolas Road and Calle Medusa in Temecula (Figure 1-2). The two new 115 kilovolt (kV) subtransmission line segments would be on the south side of Nicolas Road in Temecula, running approximately 0.25 miles west from the Triton Substation to the existing Valley-Auld-Pauba 115 kV subtransmission line. The project would include decommissioning of the existing Canine Substation, which is near the southwest corner of Nicolas Road and Calle Medusa in Temecula and decommissioning of a transformer bank at the Auld Substation in Murrieta. The project would also include installation of new telecommunications lines from the Triton Substation in Temecula through unincorporated Riverside County to the Auld Substation in Murrieta, as well as from the Triton Substation to the Moraga Substation in Temecula. Minor telecommunications equipment upgrades would be made within the substations at Auld and Stadler in Murrieta; Moraga in Temecula; Pauba and Pechanga in unincorporated Riverside County; and Valley in Romoland in Riverside County.

1.5 Project Sponsor's Name and Address

Southern California Edison Company (SCE)
2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California 91770

1.6 General Plan Designation

The City of Temecula General Plan land use designations for the main project area (substation site and subtransmission line loop-in) are Very Low Residential, Low Medium Residential, and Nicolas Valley Rural Preservation Area. The land use designations for the segments of the telecommunications lines that would pass through the City of Temecula are Very Low Density Residential, Low Density Residential,

Low Medium Density Residential, Medium Density Residential, High Density Residential, Open Space, Public Institutional, Planned Development Overlay, and Specific Plan. Land use designations for the segments of the telecommunications lines that would pass through unincorporated Riverside County are Conservation, Business Park, Light Industrial, Public Facility, and Commercial Retail. Land use designations for the segments of the telecommunications lines that would pass through the City of Murrieta are Business Park and Rural Residential.

The project would also be located in or cross zones established by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), and would fall within the City of Temecula Sphere of Influence land use designations, as well as several planning zones for the French Valley Airport.

1.7 Zoning

The City of Temecula zoning designations that apply to the main project area are Very Low Density Residential and Low Medium Density Residential. The zoning designations for the segments of the telecommunications lines that would pass through the City of Temecula are Very Low Density Residential, Low Medium Density Residential, High Density Residential, Parks and Recreation District, and Public Institutional. County of Riverside zoning designations for the segments of the telecommunications lines that would pass through unincorporated Riverside County are Winchester Properties (Silver Hawk) specific plan, residential agricultural, light agricultural, industrial park, and scenic highway commercial. Zoning designations for the segments of the telecommunications lines that would pass through the City of Murrieta are Business Park and Rural Residential.

1.8 Description of the Project

1.8.1 Project Overview

The Triton Substation would be a new 56 megavolt ampere (MVA) 115/12 kV unattended low-profile electrical substation on an approximately 10-acre property in the City of Temecula, in Riverside County, California. The applicant has designed the substation to meet existing and forecasted electrical demands of the Cities of Temecula, Murrieta, and adjacent areas of unincorporated southwestern Riverside County. While the Triton Substation would be constructed as a 56 MVA substation, it is designed to be expandable to a total capacity of 112 MVA (a 56 MVA capacity increase) to accommodate future load growth.

Completion of the project would include the following:

- Construction of a 56 MVA 115/12 kV unattended substation.
- Construction of two underground 12 kV distribution duct banks from the 12 kV switchrack at the substation to the property boundary along two different paths.
- Creation of two new 115 kV subtransmission lines, each approximately 1,300 feet long, which would loop in the existing 115 kV Valley-Auld-Pauba subtransmission line. The new lines would be the Valley-Auld-Triton 115 kV subtransmission line and the Pauba-Triton 115 kV subtransmission line. Each of the two new subtransmission segments would consist of three conductors; they would be constructed on seven or eight new double-circuit engineered tubular steel poles (TSPs).

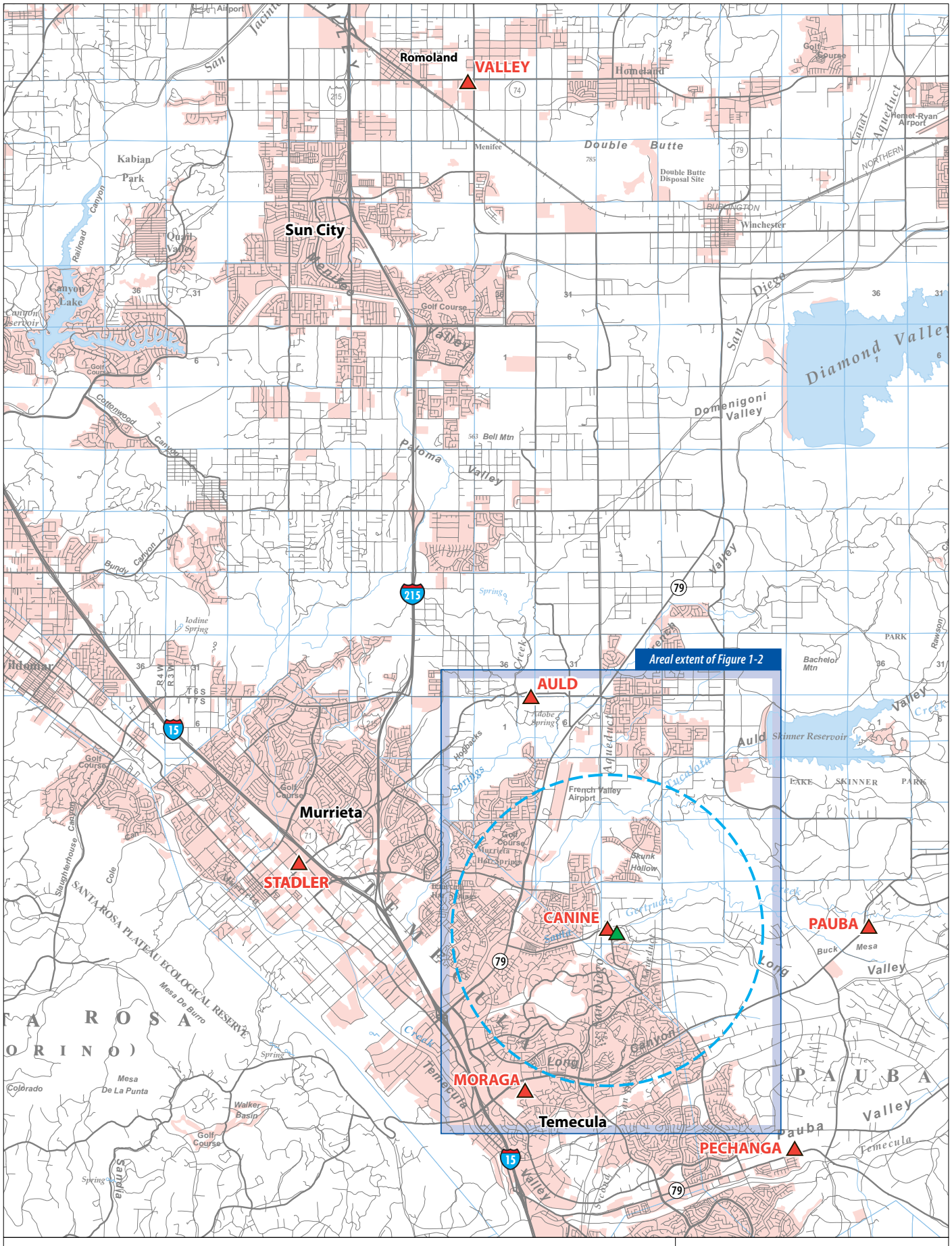

Figure 1-1

Regional Map

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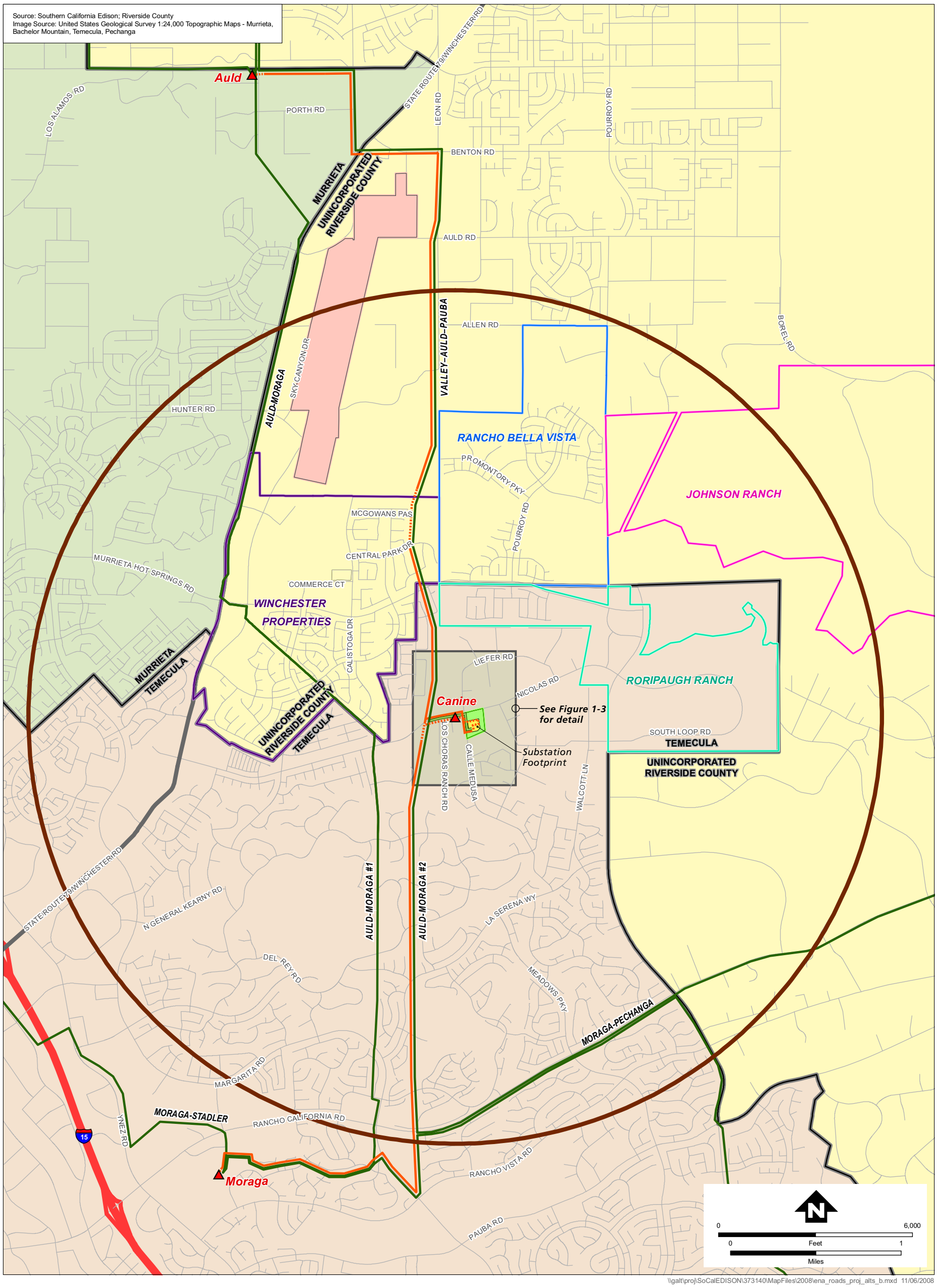
Reference: *Figure 2.5-1, Site Alternatives Considered, Triton Substation Preliminary Environmental Assessment*, Southern California Edison, November 21, 2008



LEGEND

- Existing substation
- Existing SCE 115 kV subtransmission line
- French Valley Airport
- Electrical Needs Area
- City of Temecula
- City of Murrieta
- Unincorporated Riverside County

Existing and Planned Developments

- Johnson Ranch
- Rancho Bella Vista
- Roripaugh Ranch
- #213 Winchester Properties (Silverhawk)

Proposed Project

Substations

- Triton Substation site
- Subtransmission line loop-in[1]

Telecommunication Routes[1]

- Aboveground
- Belowground

[1] – Subtransmission line loop-in and telecommunication routes are offset for graphical purposes only. Aboveground telecommunication cables would be located on subtransmission structures. Belowground telecommunication cables would be located in underground conduit.

Figure 1-2

Project Overview and Electrical Needs Area

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- Modification or replacement of one TSP currently supporting the existing 115 kV Valley-Auld-Pauba subtransmission line.
- Removal of eight wooden poles currently supporting the existing 33/12 kV distribution lines and removal of one wooden pole currently supporting the existing 12 kV distribution lines.
- Decommissioning and removal of the 18 MVA, 33/12 kV Canine Substation including the removal of two wooden poles.
- Relocation of the existing 33 kV distribution circuit from Canine Substation to the new structures and re-energizing it as a 12 kV distribution circuit.
- Decommissioning of a 33/12 kV emergency transformer bank at the Auld Substation.
- Connection of the new facilities to the applicant's telecommunications system through new telecommunications lines from the Mechanical and Electrical Equipment Room (MEER) at Triton Substation to the MEER at Auld Substation (approximately 5 miles) and from the MEER at Triton Substation to the MEER at Moraga Substation (approximately 4 miles).
- Performance of minor upgrades to existing telecommunications equipment within the MEERs at Auld, Valley, Pauba, Moraga, Stadler, and Pechanga Substations.
- The potential for future expansion of the Triton Substation from 56 MVA to 112 MVA.

1.8.2 Applicant's Purpose and Need

The applicant has designed the project to meet the long-term forecasted electrical demands of the Cities of Temecula and Murrieta and adjacent areas of unincorporated southwestern Riverside County while maintaining system reliability and enhancing operational flexibility.

The applicant identified the Electrical Needs Area (Figure 1-2) as the area currently served by the applicant's Canine 33/12 kV Substation, Moraga 115/12 kV Substation, and Auld 115/33/12 kV Substation. The applicant estimates these substations serve 40,660 metered customers.

The amount of electrical power that can be delivered in the Electrical Needs Area is limited to the maximum amount of combined electrical power these substations can transmit before their operating capacity limits are exceeded, currently 309 MVA under normal operating conditions.

The Southern California Association of Governments (SCAG) forecasts that during the next 20 years, the population of Temecula will increase by approximately 17,600 and Murrieta by 47,850. The forecasted population increase is predicted to result in approximately 8,900 new residential units in Temecula and 17,100 in Murrieta (SCAG 2004).

The applicant forecasts that the demand in the Electrical Needs Area may exceed the designed operating limits of the existing distribution facilities as early as the summer of 2010. Canine Substation is a temporary facility that is scheduled to be retired by June 2010. Similarly, the emergency transformer bank at Auld Substation is scheduled to be removed from service in 2010 when Triton Substation is operational.

According to the applicant, several areas of the Electrical Needs Area are already experiencing low-voltage conditions. The low-voltage conditions are caused by long distribution lines and increased electrical demand. Construction of the project would effectively reduce the length of the existing distribution lines, allowing the applicant to transfer electrical load between distribution lines and

substations in response to variations in demand. This would enhance operational flexibility and reduce the possibility of equipment overload, which can lead to equipment failure. According to the applicant, the reduction in length would also be necessary to maintain CPUC-mandated voltage levels.

1.8.3 Project Objectives

The applicant is proposing to construct the project to meet the following objectives:

- Serve long-term projected electrical demands in the Electrical Needs Area beginning in 2010
- Maintain system reliability within the Electrical Needs Area by locating electrical facilities in proximity to the demand
- Enhance operational flexibility by providing the ability to relieve load on surrounding substations, transfer load between distribution lines and substations within the Electrical Needs Area, and remove temporary transformers from service
- Use existing rights-of-way to the extent feasible
- Minimize the environmental impacts

1.8.4 Project Facilities

1.8.4.1 Triton Substation

The Triton Substation would be an unattended, 56 MVA 115/12 kV substation. The substation would be served by looping-in the existing Valley-Auld-Pauba 115 kV subtransmission line, which is located approximately 0.25 miles west of the proposed site (Figure 1-3).

The front entry of the new substation would face Calle Medusa and be set back a minimum of 50 feet east of the street's centerline. The north wall of the substation would be set back a minimum of 195 feet south of the centerline of Nicolas Road. The applicant estimates that the substation footprint (area contained within the perimeter wall) would be approximately 3 acres. The property frontage along Calle Medusa, consisting of approximately 1 acre, would be used for subtransmission line access, landscaping, vehicular access, and a front setback to the substation. Taking into account land for future street-widening, however, the site comprises approximately 8.5 acres of constructible land.

The new substation would include the following features:

- One 115 kV, low-profile switchrack
- Two 28 MVA 115/12 kV transformer banks
- One 12 kV low-profile switchrack
- Two 4.8 megavolt ampere reactive (MVAR) 12 kV capacitor banks
- A prefabricated MEER
- A restroom facility
- Exterior landscaping, stormwater drainage, emergency night lighting, and perimeter wall with a driveway and security gate for access to the substation

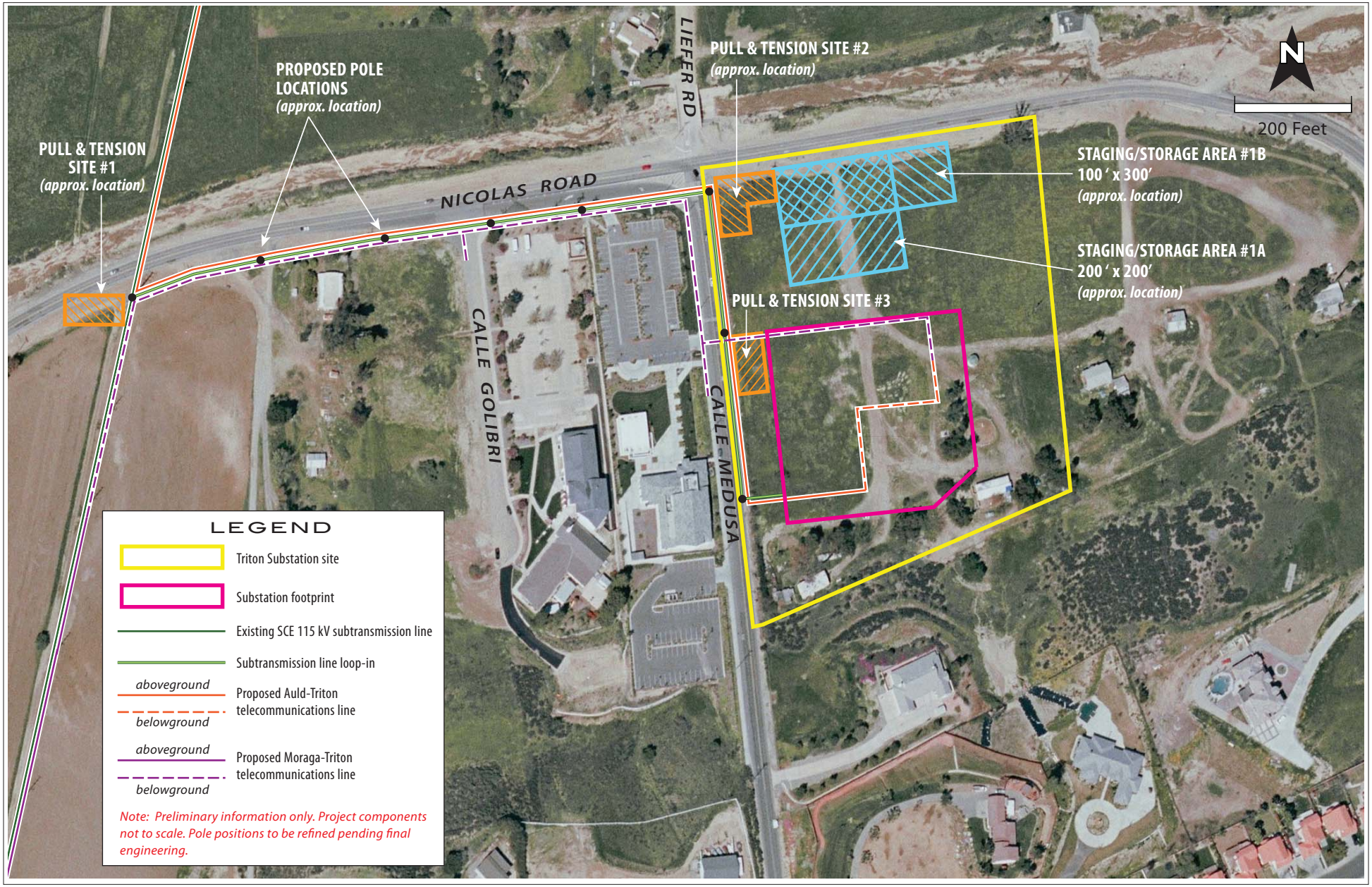

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Figure 1-3

Project Features

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Additionally, the substation would incorporate low-profile design features, which would limit the height of electrical equipment and structures to approximately 30 feet. The purpose of the MEER would be to house control and relay racks; battery and battery chargers; AC and DC distribution switchboards; and telecommunications equipment.

Lighting

Under normal conditions, the substation would not be illuminated at night. Lighting would be used when required for emergency repairs. Lighting would consist of high pressure sodium lights located in the switchracks, around the transformer banks, and areas of the yard where emergency activities might be required. Lights would be controlled by a manual switch and would normally be in the off position. These lights would be directed downward and shielded to reduce glare outside the facility.

Landscaping

Landscaping would be designed around the full perimeter of the substation in order to filter views for the surrounding community and other potential sensitive receptors near the substation. During final design, the applicant would consult with the City of Temecula to develop a landscaping and irrigation plan that would be consistent with the surrounding community, and the city would have final approval before issuing a landscaping permit. The applicant would implement the landscaping and irrigation plans after the substation wall is constructed and water service is established.

Drainage

Stormwater drainage inside the substation wall would be designed to minimize stormwater impacts on the substation operation. The internal run-off would be released from the substation through surface drainage structures. Drainage from the property would be collected and controlled by surface improvements. The applicant would be responsible for directing stormwater run-off to the subsurface drainage system and would prepare and implement drainage plans for the substation. Final design of the site drainage would be subject to the conditions of the grading permit obtained from the City of Temecula prior to construction.

Mechanical and Electrical Equipment Room

The dimensions of a typical MEER are 12 feet by 36 feet by 20 feet. Depending on the vendor, the MEER would have a light tan or beige roof and walls. The MEER might have dark brown trim along the roofline, wall joints, and doorway. The MEER would not likely have eaves or roof overhangs. The roof and exterior walls would likely be steel.

Restroom Facility

A stand-alone prefabricated permanent restroom enclosure 10 feet high, 10 feet long, and 10 feet wide would be installed in close proximity to the MEER. This facility would be connected to water and sewer lines when available. The applicant would obtain required permits from the City of Temecula prior to installation of the restroom facility and plumbing.

Security and Access

The substation would be enclosed on four sides by an 8-foot-high perimeter wall. The applicant would consult with the City of Temecula to develop the wall design, which would be consistent with the surrounding community standards and subject to the applicant's safety requirements. The city would review and approve the wall design plans prior to construction. The wall would likely be a light-colored decorative block and include periodic pilasters. A band of at least three strands of barbed wire would be affixed near the top of the perimeter wall inside of the substation. The barbed wire would not be visible

from the outside except from elevated vantage points south and southwest of the proposed substation facility.

The substation entrance would have a 20-foot wide asphalt concrete driveway leading from Calle Medusa to a locked gate for two-way traffic access into the substation. Access would extend into the substation to facilitate vehicular movement. A decorative rolling access gate would be installed with minimum dimensions of 8 feet by 24 feet.

1.8.4.2 12 kV Distribution Duct Banks

Two underground distribution duct banks, each consisting of six 5-inch conduits, would start at the 12 kV switchrack power cable trench and be routed out of the substation to the property boundary along two different paths. One path would head north to Nicolas Road and the other would head west to Calle Medusa. Each set of six 5-inch conduits would contain one conduit for telecommunications, one for a spare, and four to accommodate 12 kV distribution circuits to serve area developments.

1.8.4.3 115 kV Subtransmission Line Loop-In

The existing 115 kV Valley-Auld-Pauba subtransmission line would be looped into the Triton Substation to create two new 115 kV subtransmission line segments that would supply the source of power to the new substation. The two new line segments would be the Valley-Auld-Triton 115 kV subtransmission line and the Pauba-Triton 115 kV subtransmission line.

The new lines would extend west from the Triton Substation approximately 1,300 feet along the south side of Nicolas Road in Temecula to the existing Valley-Auld-Pauba 115 kV subtransmission line. Each of the two new subtransmission segments would consist of three conductors. The conductors for the new subtransmission lines would be constructed on at least seven new double-circuit engineered TSPs. In addition, to accommodate the line reconfiguration, The applicant would modify or replace one TSP currently supporting the existing 115 kV Valley-Auld-Pauba subtransmission line.

Tubular Steel Poles

The seven new TSPs and the eighth new or modified TSP would support the 115 kV subtransmission line conductors, the distribution lines relocated from existing distribution lines, and new telecommunications lines. Three of the new TSPs would be located along the east side of Calle Medusa and four would be located along the south side of Nicolas Road, west of Calle Medusa. The eighth TSP, which would either be modified or replaced, is located at the crossing of Nicolas Road and the existing 115 kV Valley-Auld-Pauba subtransmission line.

The new TSPs would be double-circuit structures with underbuilds for 12 kV distribution lines and telecommunications lines (Figure 1-4). They would have a non-specular galvanized surface. Steel cross-arms would be attached to each new TSP with single gray polymer insulators with either dead-end or suspension assemblies in a vertical configuration.

Eight wooden poles that currently support the 33/12 kV distribution lines from Canine Substation to the Valley-Auld-Pauba subtransmission line would be removed. A ninth wooden pole, which supports only the 12 kV distribution lines, would also be removed. The wooden poles would be removed and replaced by the TSPs.

Reference: *Figure 3.3-2, 115 kV Tubular Steel Pole (Double Circuit), Triton Substation Preliminary Environmental Assessment,* Southern California Edison, November 21, 2008

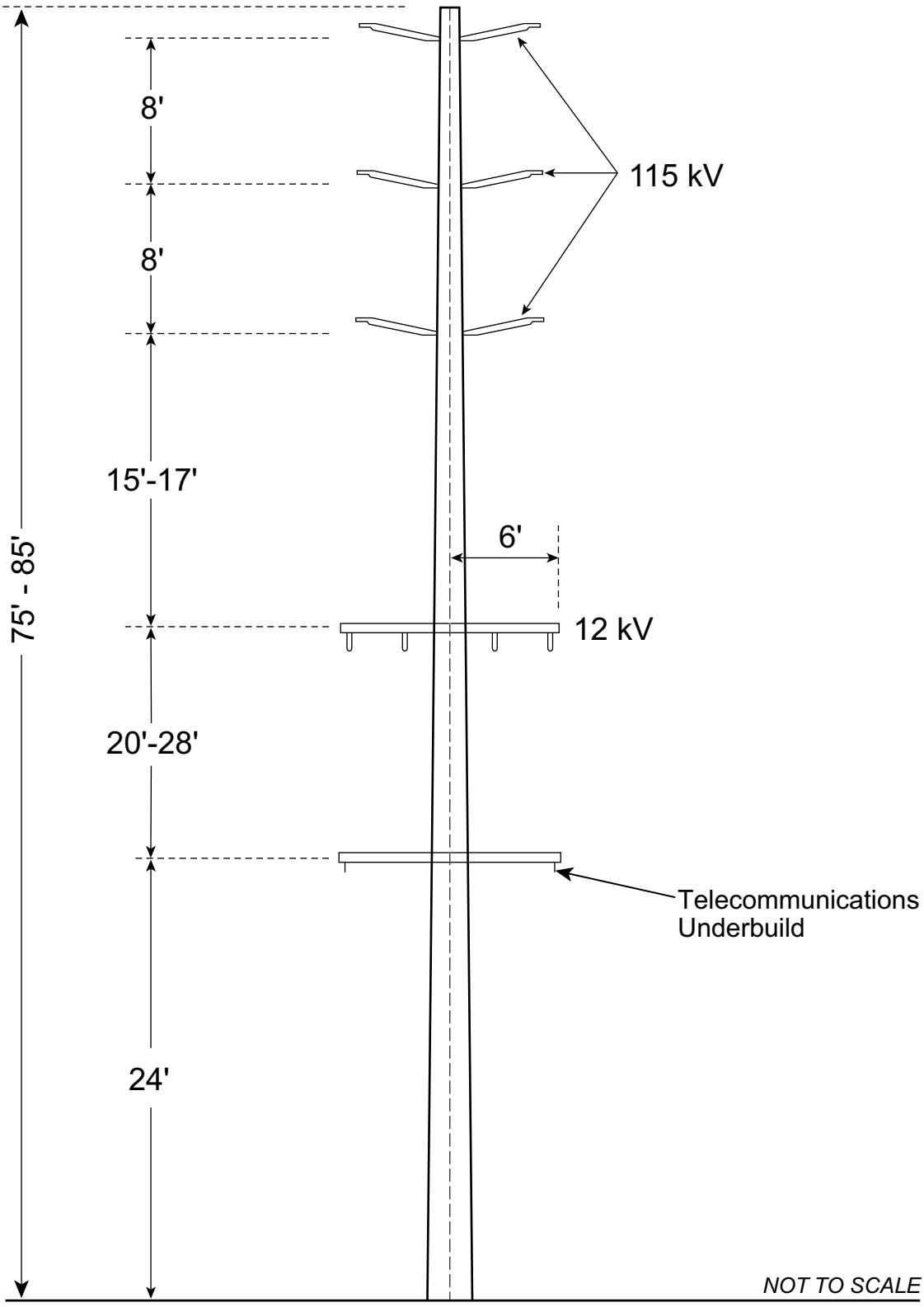

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Figure 1-4

Tubular Steel Pole for 115 kV Double-Circuit with Single-Circuit 12 kV and Telecommunications Line Underbuilds

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1.8.4.4 Relocation of Distribution Lines

Following installation of the new TSPs, the existing 33/12 kV and 12 kV distribution lines (currently carried on the wooden poles to be removed) would be relocated to the new TSPs. The distribution lines would be re-energized as a 12 kV distribution circuit.

1.8.4.5 Telecommunications Lines

Electrical equipment at Triton Substation would be operated and monitored through the applicant's telecommunications system. According to the applicant, operation and monitoring would require the installation of two 48-strand, fiber-optic cables. Telecommunications lines would be installed from Auld Substation to Triton Substation and from Triton Substation to Moraga Substation.

The telecommunications cables would connect from the new MEER at Triton Substation to existing MEERs at Auld and Moraga Substations. One cable would extend from the Auld Substation approximately 5 miles north along the existing Valley-Auld-Pauba subtransmission line to the Triton Substation. The other would extend from the Triton Substation approximately 4 miles south along the existing Auld-Moraga No. 2 subtransmission line (which shares some structures with the Valley-Auld-Pauba subtransmission line) to the Moraga Substation (Figure 1-2).

Additionally, the applicant would install optical multiplexers to upgrade existing telecommunications equipment within the MEERs at Auld, Valley, Pauba, Moraga, Stadler, and Pechanga Substations (Figure 1-1).

Triton to Auld Telecommunications Line

This telecommunications line would start from the MEER inside the northeast corner of the Triton Substation and proceed in a new trench to a riser conduit attached to a pole located inside the southwest corner of the substation. The line would leave the pole and extend overhead to the new subtransmission line loop-in structures. It would extend overhead along the new loop-in structures north to Nicolas Road. It would then cross Calle Medusa and extend west for approximately 1,050 feet along the south side of Nicolas Road to the existing Valley-Auld-Pauba 115 kV subtransmission line (Figure 1-3).

The telecommunications line would continue overhead in a northerly direction along the existing subtransmission line structures and cross Nicolas Road and Santa Gertrudis Creek. It would continue overhead for approximately 4,830 feet before descending into an existing underground conduit just south of Central Park Drive. It would continue north in the underground conduit for approximately 1,300 feet and then ascend through an existing riser conduit to the existing Valley-Auld-Pauba 115 kV subtransmission line. It would continue overhead in a northerly direction to Auld Substation. It would descend into an existing underground conduit and extend 300 feet to enter the Auld Substation boundary (Figure 1-2).

Triton to Moraga Telecommunications Line

This telecommunications line would start from the MEER inside the northeast corner of the Triton Substation and proceed in new underground conduit north for approximately 85 feet within the substation boundary. It would then continue west for approximately 300 feet to the west side of Calle Medusa. The line would continue south in new underground conduit for approximately 90 feet to an existing vault. From the vault, it would turn north and continue along the west side of Calle Medusa for approximately 300 feet to Nicolas Road. From the south side of Nicolas Road and west side of Calle Medusa, the line would travel in new underground conduit for approximately 1,000 feet to the existing Valley-Auld-Pauba

115 kV subtransmission line right-of-way (ROW). At the crossing of Calle Golibri (between Calle Medusa and the ROW), the telecommunications line would also extend south in new underground conduit for approximately 50 feet (measured from the centerline of Nicolas Road) to an existing vault (Figure 1-3).

From the intersection of Nicolas Road and the ROW, the telecommunications line would extend south in new underground conduit inside the ROW for approximately 350 feet and then ascend a new riser conduit to the existing Auld-Moraga No. 2 115 kV subtransmission line (Auld-Moraga No. 2 shares some structures with the Valley-Auld-Pauba subtransmission line). The telecommunications line would extend overhead in a southerly direction along the existing Auld-Moraga No. 2 115 kV subtransmission line to Moraga Substation. It would descend into an existing underground conduit and extend 25 feet to enter an existing vault and then enter the Moraga Substation (Figure 1-2).

1.8.4.6 Canine Substation Decommissioning

The project would include decommissioning of the Canine Substation, which is a temporary pole-top 33/12 kV substation near the southwest corner of Nicolas Road and Calle Medusa. The Canine Substation is scheduled to be retired by June 2010. It would not be decommissioned until the Triton Substation and related project facilities became operational.

Facilities at the Canine Substation include a 14 MVA, 33/12 kV transformer (the substation capacity is 18 MVA) and associated equipment (e.g., cross arms, lightning arrestors, and insulators); conductor cabling; poles and equipment installed on the poles; a transformer pad; conduit and a cement vault; gravel and vent pipes; a cinderblock wall; and a chain-link fence. The transformer and related equipment contain approximately 3,850 gallons of oil.

Decommissioning of the Canine Substation would involve de-energizing the transformer and removing it and associated equipment from the site. Cables, conductors, and other equipment would be removed from two wooden poles at the site, and the poles would be removed. The grounds and gravel, cinderblock wall, chain-link fence, transformer pad, and all other equipment and materials related to the Canine Substation would be removed. Transport of the transformer and other substation equipment and materials from the site would require the use of a crane, truck, and trailer.

1.8.4.7 Emergency Transformer Bank Decommissioning at Auld Substation

An emergency transformer bank currently in use at the Auld Substation due to excess electrical demand would be removed from service as part of the project. The emergency transformer bank is scheduled to be disconnected and de-energized in 2010 when the Triton Substation becomes operational. It would be disconnected and left in place at the Auld Substation for use during emergencies.

1.8.4.8 Triton Substation Expansion

The Triton Substation would be designed for eventual expansion from 56 MVA to 112 MVA, depending on need. Two 28 MVA transformers would be installed as part of the initial build, and there would be room for up to two additional 28 MVA transformers at the Triton Substation site. The additional transformers might be installed one at a time as needed to meet demand. In other words, the substation might be expanded from 56 MVA to 84 MVA and then from 84 MVA to 112 MVA.

1.8.5 Construction

1.8.5.1 Triton Substation

The substation footprint (area contained within the perimeter wall) would be approximately 2.5 acres. Approximately 1.5 acres of land immediately outside the substation perimeter wall to the north, east and south would be used for distribution duct banks, buffers, and landscaping. Site grading would be conducted over about 5 acres, including the substation footprint and buffer areas around the perimeter.

The internal substation area would be graded at a consistent slope of between 1 and 2 percent and compacted to 90 percent of the maximum dry density. The areas outside the substation wall would be sufficiently graded to provide drainage in keeping with the overall site drainage design. The northern and eastern portions of the overall property most likely would not be graded. Final design would be subject to the conditions of the grading permit obtained from the City of Temecula.

Approximately 0.5 acres inside the substation wall and 0.1 acres outside would be covered with an impervious surface; the remaining approximately 2 acres inside the substation wall would be covered with a loose layer of 4-inch-thick untreated crushed rock.

Grading

Earthwork for the substation would result in approximately 800 cubic yards of excavated soil. To prevent ponding within the interior of the substation, an estimated 5,000 cubic yards of imported fill would be required if the substation were graded to a 1 percent slope. The actual quantity of fill to be imported to the site would be calculated as part of the final engineering and design.

The substation grading design would incorporate Spill Prevention, Control, and Countermeasure (SPCC) Plan requirements due to the operation of oil-filled transformers at the substation. Typical SPCC Plan measures include curbs and berms designed and installed to contain spills if they occur. These design features would be part of final engineering.

Below-Grade Construction

After the substation site is graded, below-grade facilities would be installed, including a ground grid, trenches, equipment foundations, and the base of the substation wall. The design of the ground grid would be based on soil resistivity measurements collected during a geotechnical investigation that would be conducted prior to construction.

Equipment Installation

Substructures would be installed during the below-grade construction phase. After the installation of substructures, the above-grade installation of substation facilities (buses, capacitors, circuit breakers, transformers, steel structures, and the MEER) would then commence. The transformers would be delivered by heavy-transport vehicles and off-loaded on site by large cranes with support trucks. A traffic control service would be used during transformer delivery.

Installation of Base Materials

Upon completion of the substation facilities installation, a 4-inch-thick layer of untreated crushed rock would be placed within the walled area of the substation site, except in driveways and the 115 kV low-profile bus enclosures. These areas would be paved with asphalt concrete.

Testing and Energizing

Prior to energizing substation equipment, the equipment would be tested. Upon completion of successful testing, the equipment would be energized.

Stormwater Protection

Because construction of the project would disturb a surface area greater than 1 acre, the applicant would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit from the San Diego Regional Water Quality Control Board (SDRWQCB). To acquire this permit, the applicant would prepare a Storm Water Pollution Prevention Plan (SWPPP) that would detail project information; monitoring and reporting procedures; and Best Management Practices, such as dewatering procedures, stormwater runoff quality control measures, and concrete waste management, as necessary. The SWPPP would be based on final engineering design and would include all project components.

Material Staging

Construction of the project would require temporary staging and storage areas for materials and equipment during the construction process. The materials staging and storage would take place at the substation site, including conductor reels, wire stringing equipment, poles, line trucks, cross arms, insulators, and other incidental materials. The approximate locations of staging and storage areas are shown in Figure 1-3.

Construction Access

All materials for the proposed substation would be delivered by truck. The majority of the truck traffic would occur on designated truck routes and major streets. Trucks would use Nicolas Road to access the area and enter the site from Calle Medusa. Some deliveries, such as cement truck deliveries, would occur during peak hours when footing work is performed. The telecommunications crews would use public streets and the applicant's existing easements between the proposed substation and the existing Moraga and Auld Substations to install the telecommunications cable on new and existing overhead structures and underground conduit.

1.8.5.2 Tubular Steel Poles

Erecting one TSP typically requires an excavated hole approximately 7 to 9 feet in diameter and 30 feet deep. Such a hole typically results in the removal of 140 cubic yards of soil. After excavating foundation holes, reinforced steel (rebar cages) would be installed and concrete poured to create a foundation for the TSP. Cranes would be used to place the TSPs into the foundations. The TSPs would then be bolted to the foundations.

The TSPs would be delivered to the project site by truck. A traffic control service would be used during construction and the applicant would obtain the necessary encroachment permits prior to installation activities. Construction equipment used for installing and removing poles and for pulling overhead conductors would be positioned directly adjacent to the new and existing lines. The approximate locations of pull and tension sites are shown in Figure 1-3.

1.8.5.3 115 kV Subtransmission Line Segments

Conductor Installation

Conductors for the two 115 kV subtransmission line segments would be installed between the existing Valley-Auld-Pauba subtransmission line and Triton Substation. Two pull and tension sites would be

located on the Triton Substation property, and one would be located near the existing Valley-Auld-Pauba 115 kV subtransmission line (Figure 1-3).

Conductor pulling would be completed in accordance with the applicant's methods and specifications, which are similar to methods provided by the Institute of Electrical and Electronics Engineers Standard 524-1992, *Guide to the Installation of Overhead Transmission Line Conductors*. Conductors are pulled using individual reels with ropes strung along the poles. Conductors are pulled from each pull location using a conductor pulling machine. They are pulled three conductors at a time (i.e., one complete circuit per pull). A traffic control service would be used during overhead conductor pulling activities, and the applicant would obtain the necessary encroachment permits prior to conducting pulling activities.

De-energizing and Re-energizing

The existing Valley-Auld-Pauba 115 kV subtransmission line would be de-energized to complete the loop-in to the two new line segments. De-energizing and reconnecting lines to new poles could potentially be performed at night when electrical demand is lower, thereby reducing the potential for electric service outages. Once the connection (also known as a cut over) is complete, the subtransmission line would be returned to service (re-energized).

1.8.5.4 33/12 kV Distribution Line Relocation and Wooden Pole Removal

Following installation of the TSPs, the existing 33/12 kV distribution lines would be transferred to the new TSPs and the existing wooden poles would be removed. Standard practice for removing wooden electrical poles involves attaching a sling at the upper end of the pole using boom or crane equipment and using a hydraulic jack at the base of the pole to lift it out of the ground. Excavation around the base of the wooden pole is only required in the event the base of the pole has been encased in hardened soil or man-made materials (e.g., asphalt or concrete), or where there is evidence that the pole has deteriorated to the point that it would splinter or break apart by the jacking and pulling operation.

Once the wooden pole is removed, the hole would be backfilled using imported fill in combination with fill that might be available as a result of excavation for the TSP installation. Backfill material would be thoroughly tamped and the filled hole would be leveled to grade with no depression or mound. Holes located in areas subject to pedestrian traffic would be filled level to the walking surface. The last two inches of fill would consist of a firmly packed temporary blacktop patch or equivalent material until permanent walkway (e.g., concrete sidewalks) repairs could be made.

1.8.5.5 Telecommunications Lines

Overhead Cable Installation

Overhead cable would be installed by attaching cable to the existing cross arms on 115 kV subtransmission structures. A truck with a cable reel would be set up at one end of the section to be pulled, and a truck with a winch would be set up at the other end. Cable would be pulled onto the cross arms with pull rope. Cable would then be permanently secured to the cross arms, and fiber strands in the cable from one reel would be spliced to fiber strands in the cable from the next reel to form one continuous path.

Installation of the overhead cable would occur at the same time as installation of the 115 kV subtransmission line segments. A traffic control service would be used during installation. The applicant would obtain the necessary encroachment permits prior to installation. No additional soil disturbance would occur as a result of overhead cable installation.

Underground Cable Installation

Underground portions of the telecommunications system would be placed in 5-inch-diameter conduits. The conduits would be routed from the MEER to both Calle Medusa and Nicolas Road through the 12 kV underground distribution duct banks. Along Nicolas Road, the underground cables would be routed through new conduit in franchise under the road surface. A segment of new conduit would also be installed in the ROW for the existing 115 kV subtransmission line to about 350 feet south. To install the new underground conduit, the applicant would dig trenches approximately 18-inches wide and 36-inches deep. Near Central Park Drive in Murrieta, the Auld Substation, and the Moraga Substation, underground cables would be routed through existing conduit.

1.8.6 Operation and Maintenance

1.8.6.1 Triton Substation

Components of the project would require routine maintenance and might require emergency repair for service continuity. The proposed substation would be unattended, and electrical equipment within the substation would be remotely monitored and controlled by an automated system (Station Automation 2) from Valley Substation. The applicant's personnel would conduct electrical switching and routine maintenance on site. Routine maintenance would include equipment testing, monitoring, and repair. The applicant's personnel would generally visit the substation two times per month.

1.8.6.2 115 kV Subtransmission Line Segments

The applicant regularly inspects subtransmission lines, vaults, and associated components. The inspections could lead to routine and preventive maintenance. There could also be emergency repair and maintenance performed for service continuity. The new 115 kV subtransmission lines would be maintained in a manner consistent with CPUC General Order 95, which requires the applicant to maintain 30 feet of vertical clearance between wires and roads accessed by vehicles and 25 feet of vertical clearance for areas not accessed by vehicles (pedestrian only). The subtransmission line loop-in and poles could occasionally require emergency repairs. Distribution line conduits would require only emergency repairs for service continuity. No additional personnel above normal staffing levels would be required to operate or maintain these subtransmission lines.

1.8.6.3 Telecommunications Lines

The telecommunications systems would require periodic routine maintenance, which would include equipment testing, monitoring, and repair as well as emergency procedures for service continuity. No new maintenance roads are anticipated. No additional personnel beyond normal staffing levels would be required to operate or maintain the telecommunications systems for the substation.

1.8.6.4 Temporary Overload Operating Procedures

The applicant's projections indicate that if the project is not operational as scheduled, overload conditions may occur in the Electrical Needs Area during the summer of 2010 if actual demand were to exceed the operating capacity of the transformers at Auld and Moraga Substations. To mitigate potential overload conditions that may occur prior to completion of the project, the applicant would implement temporary operating procedures within the Electrical Needs Area.

The operating procedures could include contracting emergency distributed generation, initiating demand response programs, dropping load, and implementing rolling blackouts. The applicant would also extend

the operational term of Canine Substation as needed. According to the applicant, continued operation of Canine Substation, however, would serve only as a temporary emergency measure and would not be sufficient to serve sustained future projected demand in the Electrical Needs Area.

1.8.6.5 Project Schedule and Personnel Requirements

The applicant anticipates that construction of the project would take approximately 8 months to complete. Crews typically work five 10-hour days per week. Depending on local permit requirements, weekend, evening, and night work may also be required due to the scheduling of system outages and construction schedules. Construction would commence following CPUC approval, final engineering, and procurement activities. Table 1.8-1 summarizes the length of time anticipated to construct each component of the project.

Table 1.8-1 Triton Substation Project Construction Timetable

Proposed Project Component	Scheduled Beginning	Duration
Triton Substation Construction	March 2010	8 months
115 kV Subtransmission Line Installation	March 2010	3 months
12 kV Distribution Duct Banks	April 2010	2 weeks
Telecommunications System	April 2010	3 months

Construction would be performed by the applicant's construction crews and/or by contractors under the direction of the applicant's field supervisors. Anticipated construction personnel and equipment are summarized in Table 1.8-2.

Table 1.8-2 Triton Substation Project Construction Personnel and Equipment Summary

Construction Phase	Duration	Number of Personnel	Equipment	Estimated Usage/Day (Hrs)
Triton Substation				
Site Management	Length of Construction	12	1 Office Trailer (electric)	8
Civil Construction- Below Grade/ Perimeter Wall Construction and Localized Fine Grading	100 Days	12	2 Crew Trucks (gasoline or diesel) 1 Dump Truck (diesel) 1 Cement Truck (diesel) 1 Bobcat (diesel) 1 Skip Loader (diesel) 1 Forklift (diesel) 1 Stake Truck (gasoline or diesel) 1 Grader (diesel) 1 Carry-all (gasoline) 1 Water Truck (gasoline)	2 6 3 3 4 4 2 4 2 6
MEER	10 Days	4	1 Stake Truck (gasoline or diesel) 2 Crew Trucks (gasoline or diesel)	2 2
Transformer Testing and Preparation	10 Days	15	1 Generator (diesel) 1 Lift Truck (gasoline) 2 Pickup Trucks (gasoline or diesel) 1 Boom Truck (diesel) 1 Processing Trailer (electric) 1 Forklift (diesel)	6 3 2 3 6 4

Table 1.8-2 Triton Substation Project Construction Personnel and Equipment Summary

Construction Phase	Duration	Number of Personnel	Equipment	Estimated Usage/Day (Hrs)
Electrical Construction	100 Days	10	1 Boom Truck (diesel) 1 Tool Trailer (electric) 3 Crew Trucks (gasoline or diesel) 1 Flat Bed (gasoline) 1 Crane (diesel)	3 3 2 2 4
Transformer Installation Crew	1 Day	6	1 Forklift (diesel) 2 Crew Trucks (gasoline or diesel) 1 Low-boy Hauler/Tractor Truck diesel)	6 2 6
Paving Crew	10 Days	6	1 Stake Truck (gasoline or diesel) 2 Crew Trucks (gasoline or diesel) 1 Tractor (diesel) 1 Bobcat (diesel) 1 Asphalt Paver (diesel) 1 Dump Truck (diesel) 1 Barbergreen (diesel) 1 Paddle Scraper (diesel)	4 2 3 4 4 3 8 6
Test Crew	120 Days	2	1 Test Truck (gasoline)	3
115 kV Subtransmission Line Installation				
Installing Steel Pole Footings	14 Days	6	1 Utility Truck (diesel) 1 Drill Rig (diesel) 1 Cement Truck (diesel)	10
Setting New Steel Poles	7 Days	10	1 Cement Truck (diesel) 1 Drill Rig (diesel) 1 Crane (diesel) 1 Crew Truck (diesel) 1 Utility Truck (diesel) 1 SUV (gasoline)	10
Installing Overhead Conductor	5 Days	10	1 Conductor Pulling Machine (diesel) 1 Cable Dolly (diesel) 1 Utility Truck (diesel) 1 Line Truck (diesel) 1 SUV (gasoline)	10
12 kV Distribution Duct Banks				
Distribution Duct Bank Construction	2 weeks	8	1 Crew Truck (gasoline or diesel) 1 Dump Truck (gasoline or diesel) 1 Backhoe (diesel)	1 6 6
Telecommunications				
Substation Communications Installation Crew	40 days	2	2 Vans (gasoline)	4
Overhead Communications Installation Crews	25 days	4	1 Bucket Truck 1 Reel Truck	8 8
Underground Trenching Crew	6 days	3	1 Flatbed Truck 1 Backhoe 1 Stakebed Truck 1 Crew Truck (gasoline or diesel)	1 8 2 2
Underground Cable Installation Crew	6 days	4	1 Bucket Truck (gasoline or diesel) 1 Reel Truck (gasoline or diesel)	8 8

1.8.7 Project Design Considerations

The applicant has incorporated into the project a number of structural elements and practices called project design features (PDFs) to avoid or minimize potential impacts on environmental resources. These PDFs are part of the project and are distinguished from mitigation measures for potentially significant impacts under CEQA. PDFs have not been identified for all resource areas. If the project is approved, the applicant will implement the PDFs listed in Table 1.8-3 regardless of whether potential significant impacts were or were not identified during the CEQA environmental analysis.

Table 1.8-3 Project Design Features (PDFs)

Aesthetics
PDF AES-1: Substation Setback. Final siting of the substation within the property is subject to final design. The substation walls will be set back a minimum of 195 feet from the centerline of Nicolas Road and 50 feet from the centerline of Calle Medusa.
PDF AES-2: Low-Profile Substation Equipment. The substation will be designed as a low-profile substation. Low-profile design substations have smaller and shorter equipment that also reduces the overall area of the substation to approximately 81 percent of high-profile design stations.
PDF AES-3: Substation Lighting Control. The substation lighting will be designed to be controlled by switch so that it can be turned on only when required for nighttime emergency repairs. The lighting will be directed downward and shielded to eliminate offsite light spill at times when the lighting might be in use.
PDF AES-4: Non-Reflective Finish. Equipment within the substation will have a dull, gray non-reflective finish to minimize reflectivity and to make it appear to recede into the backdrop. Non-specular subtransmission cable will be installed for the new subtransmission line loop-in to minimize conductor reflectivity. Tubular steel poles (TSPs) will be galvanized steel; the poles will be gray and non-reflective.
PDF AES-5: Substation Block Wall. The substation facility will be enclosed within an 8-foot high block wall for screening. The City of Temecula will approve the final design of the block wall, which will be consistent with community standards.
PDF AES-6: Substation Landscaping. The City of Temecula will approve the final design plan for landscaping around the perimeter of the substation facility. Landscaping will be designed to screen the substation and create a composition that relates to its surroundings. Landscaping will use native, drought-tolerant vegetation in accordance with city landscaping guidelines.
Biological Resources
PDF BIO-1: Pre-Construction Surveys. Pre-construction biological clearance surveys will be performed by a qualified biologist to minimize impacts on special status plants and wildlife species. A clearance survey is a one-time survey conducted within 30 days of any ground disturbing work to determine if any special status species are present within the construction area. Pre-construction clearance surveys will be conducted for burrowing owls within 30 days of any construction-related activities (see PDF BIO-7). A pre-construction nesting bird survey will be conducted within one week prior to ground disturbing activities should construction work occur during the general nesting season (February 15 – August 31) (see PDF BIO-6). If any special status plants or wildlife species are located during clearance surveys, a qualified biologist will be present during construction to monitor activities and implement appropriate measures to avoid any impacts on the special status species (e.g., flag and avoid, utilization of construction fencing to establish buffers). If avoidance cannot be maintained, the applicant will consult with appropriate agencies.
PDF BIO-2: Biological Resources Worker Environmental Awareness Program. The applicant will develop a Worker Environmental Awareness Program (WEAP), and all construction crews and contractors will be required to participate in WEAP training prior to starting work on the project. The applicant will maintain a record of all personnel trained. Training participants will receive a sticker for their hard hat. New construction personnel added following the initial training may be trained using a video recording of the live training. The WEAP training will include a review of the special status species and other sensitive resources that could exist in the project area, the locations of the sensitive biological resources, their legal status and protections, and measures to be implemented for avoidance of these sensitive resources. Additionally, personnel will be trained on situations where it is necessary to contact a qualified biologist (e.g., should any sensitive biological resources be found during construction such as an active nest). If sensitive resources are found, the qualified biologist will provide guidelines for the personnel to follow

Table 1.8-3 Project Design Features (PDFs)

to avoid impacts on them. If it is determined that construction activity cannot avoid areas where sensitive biological resources are present, the qualified biologist will consult with the CDFG and/or USFWS, as necessary.
PDF BIO-3: Biological Monitors. Biological monitors will be used during construction within any areas found to contain sensitive biological resources. The monitors will be responsible for ensuring that impacts on special status species, their associated habitat, and/or unique resources are avoided to the fullest extent possible. Where appropriate, monitors will flag the boundaries of areas where activities need to be restricted to protect special status plant and wildlife species. These restricted areas will be monitored to ensure their protection during construction. If wildlife resources not considered to have special status are found within the project area during construction, the monitor will relocate the individual out of the project area.
PDF BIO-4: Avian Protection. All transmission, subtransmission, and distribution structures will be designed to be avian-safe in accordance with the Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (Avian Power Line Interaction Committee 2006).
PDF BIO-5: Best Management Practices. Construction and operation crews will use Best Management Practices (BMPs) in accordance with the Storm Water Pollution Prevention Plan (SWPPP). These measures will be identified in the SWPPP prior to construction and incorporated into the construction and maintenance operations. BMPs may address issues such as preserving existing vegetation, controlling sediment, managing stockpiles, and minimizing erosion.
PDF BIO-6: Nesting Birds. To minimize potential impacts on selected nesting special status birds, raptors, or other MBTA bird species, planned vegetation trimming and/or clearing will take place during the non-breeding season (September 1 – February 14), to the extent feasible. This will discourage the species from nesting within the work area. Trees, shrubs, or other vegetation occupied that would provide suitable structure for nesting would be removed. If vegetation trimming, vegetation clearing, and/or ground disturbance must take place during nesting season (February 15 – August 31), pre-construction nest surveys will be conducted by a biologist prior to trimming, clearing, and ground disturbance. Pre-construction nest surveys will be conducted to a distance of 500 feet from construction areas at the substation site and the subtransmission line loop-in and 100 feet from the centerline of the remainder of the telecommunications route. If the biologist finds an active nest within or adjacent to the construction area and determines that there may be impacts on the nest, the biologist will delineate an appropriate buffer zone around the nest depending on the sensitivity of the species and the type of construction activity. Only construction activities (if any) approved by the biologist will take place within the buffer zone until the nest is vacated. If nests are found and they cannot be avoided by project activities, or if work is scheduled to take place in close proximity to an active nest, the applicant will coordinate with the CDFG and USFWS and obtain verbal or written concurrence prior to moving the nest.
PDF BIO-7: Burrowing Owls. Pre-construction burrowing owl surveys will be conducted in all areas where there will be ground disturbance to determine presence or absence. A qualified biologist will survey within 500 feet of construction areas for the presence of any active owl burrows within 30 days prior to the onset of construction activities. If no burrows are found, no further action will be required. If unoccupied burrows are found, the qualified biologist will immediately close (collapse) them to prevent subsequent occupancy. Any active burrow found during survey efforts will be mapped on the construction plans. If nesting pairs are found, adequate buffers shall be established around occupied burrows. Any encroachment into the buffer area around the active burrow will be allowed only if the biologist determines that the proposed activity will not disturb the nest occupants. A 50 meter (160 foot) buffer will be maintained from active burrows during the non-breeding season. The nest site will be monitored by a qualified biologist, and when the owl is away from the nest, the biologist will either actively or passively relocate the burrowing owl. The biologist will then close (collapse) the burrow to prevent re-occupancy. If nesting activity is present at an active burrow, the active site will be protected until nesting activity has ended. A 75 meter (250 foot) buffer will be maintained from active burrows during the nesting season (February 15 – August 31). Construction can proceed when the qualified biologist has determined that fledglings have left the nest. If active burrows cannot be avoided, an appropriate relocation strategy would be developed in conjunction with the CDFG and may include: collapsing burrows outside of nesting season; and the use of exclusionary devices to reduce impacts to the burrowing owl.
PDF BIO-8: Special Status Plants. For any construction area that has the potential to support special status plants, protocol-level botanical surveys will be repeated prior to construction and during the blooming season. Alternatively, the applicant may choose to become a Participating Special Entity in the Western Riverside County Multiple Species Habitat Conservation Plan. The applicant will consult with the CDFG and/or USFWS if it is determined that any special status plant species may be impacted by the project. If possible, the species will be relocated to a suitable replacement site. This may involve transplantation and/or seed collection. Prior to establishing a replacement site, a qualified biologist will prepare a

Table 1.8-3 Project Design Features (PDFs)

monitoring and reporting plan that will be implemented. The plan will be approved by the CDFG and/or USFWS prior to implementation. The biologist will have full authority to suspend any operation which is, in the qualified biologist's opinion, not consistent with the monitoring and reporting plan.
PDF BIO-9: Lighting. Night lighting will be directed away from open spaces adjacent to the substation site in accordance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Shielding will be incorporated in the final project design to ensure ambient lighting is not increased. If construction lighting is needed, directed shielding will be used.
PDF BIO-10: Noise. If the construction noise levels are expected to potentially cause substantial impacts on wildlife species, as determined by a qualified biologist, proposed noise-generating activities shall incorporate temporary features such as setbacks to minimize the effects of noise on areas adjacent to the selected site.
Cultural Resources
PDF CUL-1: Cultural Resources Worker Environmental Awareness Program Training. Prior to beginning construction, the applicant will develop WEAP training for any cultural resources encountered during construction. All construction crews and contractors will be required to receive the training prior to starting work on the project. The applicant will maintain a record of all personnel trained. Training participants will receive a sticker for their hard hat. New construction personnel added following the initial training may be trained using a video recording of the live training. The training will comply with all applicable federal, state, and local cultural resource guidelines and regulations, including California Health and Safety Code Sections 5097.98, 5097.99 and 7050, and CEQA Guidelines §§15064.5(e) and (f). The training will be developed with input from interested Native American groups. At a minimum, the training will cover: • Designation and responsibilities of archaeological monitors • The designation, responsibilities, and participation of Native American observers • Authority to halt construction if cultural resources or human remains are uncovered • Protection of human remains while awaiting recommendations from most likely descendants (as designated by the NAHC) • Treatment of human remains as recommended by Native American most likely descendants (as designated by the NAHC) • Data recovery plans in the event that avoidance of cultural resources is infeasible due to engineering constraints • Cultural resource avoidance and preservation • Reporting of monitoring, discoveries of cultural resources and/or human remains, and mitigation • Curation of archaeological material not associated with human remains
PDF CUL-2: Historic and Archaeological Monitoring. A qualified archaeologist will conduct full-time monitoring of all areas of the project where ground disturbing activities would occur. The archaeological monitor will have a working knowledge of the project area and will be competent to identify the range of cultural resources known to exist in the vicinity of the project. The monitor will have the authority to temporarily stop construction activities to inspect areas where ground disturbance has revealed potential cultural resources. The applicant will suspend construction activities until the archaeologist has inspected the discovery and determined any required or recommended treatment for the resource(s).
PDF CUL-3: Human Remains Stop Work. If human remains are encountered work will stop so that no further disturbance will occur until the Riverside County Coroner and a qualified archaeologist have assessed the remains, per California Health and Safety Code Section 7050.5. Further, pursuant to California Public Resources Code Section 5097.98(b), the remains will be left in place and free from disturbance and no work will occur within 15 meters of the human remains until the Riverside County Coroner has conducted a formal evaluation of the remains. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission will be contacted in accordance with the procedures outlined in CEQA Guideline §§15064.5(e). In compliance with California Public Resources Code Section 5097.98, remains determined to be Native American will be left in place and free from disturbance until a final decision as to their treatment and disposition has been made. Additionally, pursuant to the specific exemption set forth in California Government Code §6452(r), the location of Native American remains will not be disclosed to the public. The applicant will engage in consultations with the Native American Heritage Commission designated most likely descendant and consider his or her recommendations concerning the treatment of remains.

Table 1.8-3 Project Design Features (PDFs)

PDF CUL-4: Native American Consultation and Monitoring. The applicant will consult with all interested Native American groups, per the recommendation of the Native American Heritage Commission, prior to project construction. The tribes will be notified at least 30 days prior to ground-disturbing construction activities and invited to voluntarily observe ground-disturbing activities and offer any recommendations to the qualified archaeological monitor for the project. The archaeological monitor will order construction work to temporarily stop if cultural resources are identified during construction activities (PDF CUL-2). The qualified archaeological monitor will consult with the Native American observers in determining the potential significance of the resource and any required or recommended treatment. The most likely descendant as determined by the Native American Heritage Commission will be consulted for the treatment, recovery, and curation of any Native American ceremonial artifacts or items of cultural patrimony discovered.
PDF CUL-5: Paleontological Monitoring and Stop Work. A qualified paleontologist will conduct a ground survey, at least 30 days prior to any ground disturbance, to assess if there are any paleontological resources present on the ground surface. If paleontological resources are present on the ground surface, a preconstruction recovery of fossils will be conducted. A paleontological monitor will be present in areas where the Pauba Formation is at the surface or may be encountered in subsurface excavations. The paleontological monitor will have the authority to temporarily stop construction activities to inspect any potentially significant paleontological discovery and determine treatment to reduce potentially significant impacts on paleontological resources, including recovery of the resource.
Geology and Soils
PDF GEO-1: Seismic Design. For new substation construction, specific requirements for seismic design will be per the requirements of the Institute of Electrical and Electronics Engineers (IEEE) 693 *Recommended Practices for Seismic Design of Substations*.
PDF GEO-2: Geotechnical Study. Prior to final design of substation facilities and pole foundations, a geotechnical study will be performed to identify site-specific geologic conditions and potential geologic hazards. The geotechnical study will be performed at the substation site and in areas where poles will be placed. The study will be performed by professional civil or geotechnical engineers or engineering geologists licensed in the State of California and will provide appropriate design and construction recommendations that will be incorporated into the design of the project to reduce potential impacts from geologic hazards or soil conditions.
Hazards and Hazardous Materials
PDF HAZ-1: Phase I and Phase II Environmental Site Assessments. The applicant will perform a Phase I and Phase II ESA, as well as a geotechnical study (PDF GEO-2), prior to acquisition of new property to identify potential impacts on soil and groundwater in the areas to be graded or excavated as part of the project. Potential hazardous materials site(s) will be remediated, as required by jurisdictional agencies and as applicable.
PDF HAZ-2: Wood Pole Removal. The wood poles removed during the 115 kV subtransmission line installation will be reused by the applicant, recycled, or disposed of in a licensed Class I hazardous waste landfill.
PDF HAZ-3: (removed)
PDF HAZ-4: Traffic Control. The applicant will consult with local and state agencies, including the California Department of Transportation (Caltrans) as applicable, prior to initiation of construction activities that may affect traffic (e.g., equipment delivery necessitating lane closures, pole installation, stringing of conductors, trenching for the telecommunications lines), and will implement appropriate traffic controls to avoid or minimize impacts on traffic.
PDF HAZ-5: Fire Prevention and Response Practices. The applicant will implement standard fire prevention and response practices for construction and operation activities to minimize the risk of fire danger, and in the case of fire, provide for immediate suppression and notification. The fire prevention and response practices include but are not limited to spark arresters, smoking and fire rules, storage and parking areas, use of gasoline-powered tools, road closures, use of a fire guard, fire suppression equipment and training requirements, and vegetation clearing. In addition, vehicle parking, storage areas, stationary engine site and welding areas will be cleared of vegetation and flammable materials. Areas used for dispensing or storage of gasoline, diesel fuel or other oil products will be cleared of vegetation and other flammable materials and no smoking will occur in these areas. The substation will be grounded to prevent electric shock and surges that could ignite fires.
PDF HAZ-6: Vegetation Clearance. As applicable, the applicant will maintain vegetation clearance during the life of the Triton Substation to reduce the fire hazard potential. Regular maintenance is typically conducted once or twice a year and consists of mowing and hand clearing shrubs.

Table 1.8-3 Project Design Features (PDFs)

Hydrology and Water Quality
PDF HYDRO-1: NPDES Construction Activities Storm Water General Permit. The applicant will apply for a Construction Activities Storm Water General Permit (Order 99-08-DWQ). The requirement is part of the federal National Pollutant Discharge Elimination System (NPDES). As a requirement of the permit best management practices (BMPs) will be developed and set out within a Storm Water Pollution Prevention Plan (SWPPP). BMPs to be implemented may include, but are not limited to; the use of silt fencing, gravel barriers, and sand bags to protect wetlands and streams as well as minimize erosion and sediment from entering water bodies. Construction crew training will include the protection of water bodies from construction activities.
PDF HYDRO-2: Hazardous Materials Near Drainages. No oil or hazardous materials storage, staging, use or transfer shall occur within 50 feet of any surface water body, surface drainage, or storm-drain drop inlet. Work vehicles will receive regular engine maintenance and equipment checks to avoid and detect leaks. Construction crew training will include measures to prevent the release or accidental spillage of solid waste, garbage, construction debris, sanitary waste, industrial waste, radioactive substances, oil and other petroleum products, and other wastes into water bodies or water sources.
PDF HYDRO-3: Material Safety Data Sheets. Material Safety Data Sheets will be made available to all site workers for cases of emergency.
PDF HYDRO-4: Spill Prevention, Control, and Countermeasure (SPCC) Plan. The applicant will prepare and implement a Spill Prevention, Control, and Countermeasure (SPCC) Plan that includes the hazardous/non-hazardous materials used during operation.
PDF HYDRO-5: Dewatering Plan. If the site-specific geotechnical study (PDF GEO-2) indicates that groundwater is expected to be encountered during construction, the applicant will prepare and implement a dewatering plan that will be included in the construction SWPPP.
PDF HYDRO-6: Jurisdictional Areas of Streams and Drainage. No infrastructure associated with the project will be situated within jurisdictional areas of streams and drainages (e.g., channels and banks). Although the proposed telecommunications lines will not cross under any water bodies, poles located on nearby land areas of waterways will be engineered to withstand stresses associated with their proximity to the waterways.
PDF HYDRO-7: Facilitate Existing Drainage. The substation and poles will be designed and engineered to facilitate existing drainage patterns to minimize or avoid any potential impacts from erosion and siltation.
PDF HYDRO-8: Drainage Control Features. Drainage control features will be installed where appropriate, as well as other stormwater protection measures included as part of the SWPPP.
PDF HYDRO-9: Substation Stormwater Drainage. The City of Temecula will approve final design of site drainage, which will be subject to the conditions of the grading permit. Stormwater drainage inside the substation wall will be designed to control sediment and minimize erosion. The internal runoff will be released from the substation by means of surface drainage structures. Drainage from the property will be collected and controlled by surface improvements. The applicant will direct stormwater runoff to the subsurface drainage system.
PDF HYDRO-10: Existing Stormwater Drainage Systems. Substation facilities will be engineered to use existing stormwater drainage systems, including but not limited to Santa Gertrudis Creek or County of Riverside stormwater collection facilities, as applicable. Stormwater discharge to existing drainages shall meet required volumes and quality as prescribed by appropriate state and local authorities.
Land Use and Planning
PDF LU-1: Public Notification and Complaint Procedures. The applicant will develop and implement the following public notification and complaints procedures: • Fifteen days prior to construction of the Triton Substation, the applicant will provide notice to property and business owners located within 300 feet of the substation site and within 300 feet of the construction activity to be conducted along Nicolas Road, including staging areas and access roads. The notice will describe the location and duration of construction activities, including activities associated with telecommunications lines installation. The applicant will provide the notice by mail and newspaper advertising. • A toll-free number will be established and listed on the notice to receive public concerns or complaints regarding construction activities, including but not limited to dust and noise. The applicant will establish procedures to document,

Table 1.8-3 Project Design Features (PDFs)

investigate, evaluate, and resolve all project-related complaints. • Procedures for the resolution of legitimate complaints will include suspension of construction activities until other satisfactory measures can be implemented.
Noise
PDF NOI-1: Construction Equipment Working Order. Construction equipment will be maintained per manufacture's recommendations to ensure equipment is adequately muffled. A vehicle log will be kept on site to ensure equipment maintenance schedule meets manufacture's standard. Vehicle and equipment idling time will not exceed 5 minutes unless it is necessary for safety reasons or to complete a function of the vehicle (e.g., concrete agitation, or for hydraulic power to a crane or fuel pump).
PDF NOI-2: Hearing Protection for Workers. Workers will be provided appropriate hearing protection, if necessary.
PDF NOI-3: Low-Level Noise Equipment. During final engineering, equipment will be selected and/or barriers will be installed to achieve a level of less than 60 dBA at the closest sensitive receptor, as available and practicable.
Recreation
PDF REC-1: Public Notification. In the event short-term restrictions on recreation use of Veterans Park or other parks; existing bike lanes; bike paths; or trails are necessary during project construction, the applicant will notify the public in coordination with Riverside County, the City of Temecula, and the City of Murrieta, as applicable.
Transportation/Traffic
PDF TT-1: Traffic Control Services. Traffic control services will be used for equipment, supply delivery, pole installation, conductor stringing, and installation of the telecommunications lines following guidelines in the Work Area Traffic Control Handbook (WATCH) 2009 Manual (American Public Works Association) and in accordance with the California Vehicle Code.
PDF TT-2: Incorporate Protective Measures. Any construction or installation work requiring the crossing of a local street, highway, or rail line will incorporate the use of guard poles, netting, or similar means to protect moving traffic and structures from the activity.
PDF TT-3: Traffic Management. The applicant will follow guidelines outlined in the WATCH Manual, the California Vehicle Code, and City of Temecula and other local requirements. The applicant will provide traffic control services to ensure an adequate flow of traffic by providing sufficient signage, flagmen, and escort vehicles to alert roadway users of construction zones; notification of emergency responders and the public of planned work activities that could disrupt traffic on roadways or other transportation routes; scheduling roadway work during periods of minimum traffic flow; and specific controls for traffic around schools. Additionally, the applicant shall implement the following measures: • Truck traffic shall use designated truck routes when arriving to and leaving from project areas. • Though some construction worker commutes may be required during peak traffic hours, the majority of construction workers will begin work at 6:00 AM and end at 3:00 PM. • Though occasional construction traffic during peak traffic hours may be necessary, the majority of construction traffic shall be scheduled for off-peak hours.
PDF TT-4: Repair Damaged Streets. Any damage to local streets will be repaired, and streets will be restored to their pre-project condition.
Utilities and Service Systems
PDF UTIL-1: Notice of Termination. The applicant will submit the Notice of Termination upon reaching stabilization of the project area per the Construction Activities Storm Water General Permit Order 99-08-DWQ.
PDF UTIL-2: Recycle Waste Materials. Materials generated by removal of the existing lines and poles will be processed into roll-off boxes and sent to a commercial metal-recycling facility in where recyclable or salvageable items (e.g., conductor, steel, hardware) are received, sorted, and baled, then sold on the open market. The applicant will categorize waste materials that cannot be recycled to assist with proper final disposal. Soil from drilling, site grading, or excavation for new pole foundations will be screened and separated for use as backfill material at the site of origin to the maximum extent possible.

1.9 Surrounding Land Uses and Setting

The Triton Substation project area is located within the Cities of Temecula and Murrieta and the County of Riverside (Figure 1-2). The main project elements, including the substation, the 12 kV distribution duct banks, and the subtransmission line loop-in, are located on or adjacent to the Triton Substation site (main project area).

The substation site is a 10-acre area of land owned by the applicant, located on the southeast corner of Nicolas Road and Calle Medusa in the City of Temecula (Figure 1-2). Some structures currently exist on the site, but otherwise the parcel is largely unimproved. The site is relatively flat, although near the foot of some gently sloping terrain, with some trees and sparse, scrubby vegetation. The site is bounded by Nicolas Road and relatively undeveloped, rural land to the north and Calle Medusa and a parcel with a church complex to the west. Lightly developed, rural land borders the site to the east, and a low-density residential area borders the site to the south.

The subtransmission line loop-in, consisting of two new 115 kV line segments, would extend approximately 1,300 feet from the Triton Substation site west along Nicolas Road to the existing Valley-Auld-Pauba subtransmission line. The distribution duct banks for the substation would be located on the substation site, to the north and west of the substation facility.

The telecommunications line would extend from the Triton Substation site approximately 4 miles south to the Moraga Substation, located in the City of Temecula, and approximately 5 miles north through the City of Temecula, unincorporated Riverside County, and the City of Murrieta to the Auld Substation, located in Murrieta (Figure 1-2).

The northern extent of the telecommunications line would be located in an existing ROW that passes through areas of very low to medium density residential development in the City of Temecula and into unincorporated Riverside County. Going further north from the border between Temecula and Riverside County, this ROW passes through areas of low to medium density residential development and relatively undeveloped conservation areas, through an area developed with industrial, business park, and commercial retail uses, and approximately 1,000 feet to the east of the French Valley Airport and into the City of Murrieta. In the City of Murrieta, the ROW passes north through areas designated for business park uses, and then west through areas with a rural residential designation, leading to the Auld Substation.

The southern extent of the telecommunications lines would be located in an existing ROW in Temecula that passes through residential areas ranging from very low to high density, open space (including the Temeku Hills Golf Course), and along the boundary of the Temecula United Methodist Church, before leading to the Moraga Substation.

1.10 Other Public Agencies Whose Approval is Required

The applicant has submitted an application for a Permit to Construct (Application No. A.08-11-019) from the CPUC pursuant to Public Utilities Code Section 1001 and General Order 131-D. Although the CPUC has exclusive authority to issue a Permit to Construct, CPUC General Order 131-D, Section III C requires that, “the utility to communicate with, and obtain the input of, local authorities regarding land use matters and obtain any non-discretionary local permits.” The following required permits and approvals have been identified for the project. Additional permits and approvals may also be required.

- **City of Temecula, Grading Permit.** The City of Temecula requires a Grading Permit for all construction activities requiring grading to ensure that soil is not stripped and removed, impacting aesthetic values within the city and leaving land susceptible to erosion, subsidence, faulty drainage, and sediment deposition. The Grading Permit requires submission and approval of an Erosion and Sediment Control Plan, a Soils Report, a Hydrology Study, a Water Quality Management Plan, and an onsite Construction Security Worksheet.
- **City of Temecula, Building Permit.** Prior to issuing the Building Permit, the City of Temecula Development Department will review and plan-check the project to ensure compliance with City codes, ordinances, and policies. As part of the review and plan-check process and prior to issuing the Building Permit, project design must be approved including landscaping design, wall design, and plumbing plans for the onsite restroom facility.
- **City of Temecula, Encroachment Permit.** The City of Temecula requires an Encroachment Permit for utility trenching. As part of the application for the Encroachment Permit, the applicant must submit construction drawings and a traffic control plan for any work that would take place in public streets.
- **San Diego Regional Water Quality Control Board, National Pollutant Discharge Permit.** Construction of the project and alternatives would disturb a surface area greater than 1 acre and the applicant would be required to obtain a NPDES permit from the SDRWQCB. As part of this permit, a SWPPP would be developed and implemented.