

4.0 Environmental Analysis

This chapter evaluates environmental impacts that would result from construction and operation of the proposed project. The chapter includes sections for each of the following resource areas:

4.1	Aesthetics	4.9	Hydrology and Water Quality
4.2	Agriculture and Forestry Resources	4.10	Land Use and Planning
4.3	Air Quality	4.11	Noise
4.4	Biological Resources	4.12	Population and Housing
4.5	Cultural Resources	4.13	Public Services and Utilities
4.6	Geology, Soils, and Mineral Resources	4.14	Recreation
4.7	Greenhouse Gas Emissions	4.15	Transportation and Traffic
4.8	Hazards and Hazardous Materials		

Each resource area is organized under the following headings:

- Environmental Setting;
- Regulatory Setting;
- Impact Analysis; and
- Mitigation Measures.

Environmental and Regulatory Setting

Pursuant to the CEQA Guidelines Section 15125(a), the baseline conditions described in the environmental and regulatory settings sections of this chapter reflect the conditions at the time the Notice of Preparation of this EIR was published (January 9, 2013).

Impact Analysis

This chapter evaluates the environmental impacts of construction and operation of the proposed project. Further information about the methodologies applied to the analysis conducted for each resource area is presented in each resource area section (Sections 4.1 through 4.15).

The significance criteria used for the analysis of environmental impacts are based on Appendix G of the CEQA Guidelines. The criteria serve as a benchmark for determining if the proposed project would result in significant impacts when evaluated against the baseline conditions established in the setting sections for each resource area. According to the State CEQA Guidelines (Section 15382), a “significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project.”

1 **Mitigation Measures**

2 When significant impacts are identified, feasible mitigation measures have been presented to avoid or
3 reduce the impacts. The effectiveness of a mitigation measure is subsequently determined by evaluating
4 the impact remaining after its application. Implementation of more than one mitigation measure may be
5 needed to reduce an impact to below a level of significance. The mitigation measures recommended in
6 this document are identified within each resource area (Sections 4.1 through 4.15) and are presented in
7 the Mitigation Monitoring and Reporting Plan in Chapter 8.

4.1 Aesthetics

This section uses the Federal Highway Administration (FHWA) Visual Impact Assessment for Highway Projects methodology (FHWA 1988~~4~~) to describe the existing visual setting of the South Orange County Reliability Enhancement Project (proposed project), identify potentially sensitive views, and assess the levels of visual contrast that would be introduced through construction and operation of the proposed project. This assessment is confined to the proposed project's region of influence (ROI), which is defined as the proposed project footprint and adjacent environment that is observed by the public.

This section also responds to concerns raised by interested parties during the public scoping process. The majority of public scoping comments pertaining to aesthetics were related to the design of the proposed San Juan Capistrano Substation.¹ Commenters expressed concerns that the proposed design of the substation would not be consistent with the Community Design Element of the City of San Juan Capistrano's General Plan (City of San Juan Capistrano 1999). Other comments regarding the design of the proposed San Juan Capistrano Substation expressed concern about the proposed materials, landscaping, and layout of the new substation.

In response to these comments, San Diego Gas & Electric Company (SDG&E, or the applicant) hosted a two-hour meeting (a design charrette) with the local community and City of San Juan Capistrano officials at the San Juan Hills Golf Club on April 18, 2012. The goal of the meeting was to identify an architectural design theme for the proposed San Juan Capistrano Substation perimeter wall.

Approximately 50 members of the public attended the meeting. The attendees included local residents, the City of San Juan Capistrano Architectural Design Review Committee, city officials, and other interested parties. The favored design concept at the April 18, 2012, meeting was the Spanish mission style depicted in the Proponent's Environmental Assessment (SDG&E 2012). The applicant met with members of the City of San Juan Capistrano Architectural Design Review Committee in 2013 after holding the April 2012 public meeting. The applicant worked with an architect to incorporate the Spanish mission style design and presented the design to the City of San Juan Capistrano Architectural Design Review Committee on July 29, 2014.

Section 3.3 of the Public Scoping Report (Appendix A) contains a full synopsis of all comments received during public scoping, along with all of the original comment letters in their unabridged format.

4.1.1 Environmental Setting

The proposed project is located in southern California's Peninsular Range, which consists of a series of northwest trending ridges that stretch from the Transverse Range (near Los Angeles) into Baja California. This portion of the Peninsular Range was affected by the recent glaciation, which formed the ridges and canyons presently featured in the ROI. The withdrawal of glaciers formed other landscape features, such as San Juan Creek and Talega Creek, which presently flow westerly from the Cleveland National Forest to the Pacific Ocean, by way of the Orange County Coastal plain, where the proposed project would be located. Key vegetation communities within the region include coastal scrub, chaparral, non-native grasslands, and oak woodland habitats (Holland and Keil 1995).

The area's cultural landscape was largely influenced by the Spanish colonial period, and architecture in the area is still influenced by the missions that were built during that time. Mission San Juan Capistrano,

¹ The existing substation is referred to as the *Capistrano Substation*, while the new substation is referred to as the *San Juan Capistrano Substation*.

1 from which the city derives its name, is less than 1 mile from the existing Capistrano Substation.
2 Although settlement in the region occurred as early as the 1700s, when the Mission San Juan Capistrano
3 was established, most of the development in the region has occurred since the 1950s. Established natural
4 vegetation communities have been either preserved as open space and parks or replaced with urban
5 development consisting of residential communities, golf courses, a landfill, and major transportation and
6 electric transmission infrastructure (SDG&E 2012).

7 8 **4.1.1.1 Methodology** 9

10 The FHWA Visual Impact Assessment for Highway Projects methodology (FHWA 1988~~4~~) was applied
11 in preparing the aesthetic resource analysis presented in Sections 4.1.4 and 4.1.5, below. The FHWA
12 methodology, which is an industry-standard evaluation methodology for assessing aesthetic impacts for
13 linear projects, includes the following steps:

- 14
15 1. Establish a visual environment for the proposed project area by identifying “landscape unit(s)” in
16 which the proposed project would be located.
- 17
18 2. Assess the visual resources of the proposed project area by describing the visual character of the
19 area and assessing the visual quality. The FHWA describes visual character in terms of the four
20 visual pattern elements: form, line, color, and texture. Visual quality is assessed based on
21 vividness, intactness, and unity of views. The terms *vividness*, *intactness*, and *unity* are described
22 below.
- 23
24 3. Describe the potentially affected viewers in terms of viewer exposure to components of the
25 proposed project and the levels of viewer sensitivity. Viewer exposure considers the distance of
26 the viewer to components of the proposed project, the position of the viewer in terms of relative
27 elevation, the direction of the view, approximate numbers of viewers, and the duration and
28 frequency of views. Viewer sensitivity describes viewers’ expectations or concerns regarding
29 views and visual quality based on viewer activity and awareness and any local or cultural
30 significance of features within the landscape.
- 31
32 4. Develop simulations to predict the potential visual impact of the proposed project. Visual impact
33 is a function of the projected visual resource change and anticipated viewer response.

34 In accordance with the FHWA methodology, this analysis organizes the baseline environmental setting,
35 including context photographs, by landscape unit, and describes potential viewers of the proposed project
36 components (Section 4.1.1). Key observation points (KOPs) were selected to establish the visual baseline
37 of the project area, as well as to estimate the level of contrast that would be introduced by components of
38 the proposed project, and simulations were developed and used as a basis for the analysis of impacts.

39 **Vividness, Intactness, and Unity**

40 The visual character and quality of the region and the proposed project area are described using criteria
41 established by the FHWA for visual landscape relationships. The criteria for describing visual quality can
42 include vividness, intactness, or unity, as defined below:

- 43 • Vividness is the visual power or memorability of landscape components as they combine in
44 striking or distinctive visual patterns.
- 45 • Intactness is the visual integrity of the natural and human-built landscape and its freedom from
46 encroaching elements; this factor can be present in well-kept urban and rural landscapes, as well
47 as in natural settings.

- Unity is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the landscape. (FHWA 1988~~4~~).

4.1.1.2 Visual Sensitivity

To establish the environmental setting for the proposed project's ROI, the visual sensitivity of potentially affected viewer groups must be determined. Visual sensitivity depends on the number and types of viewers and the frequency and duration of views. Generally, visual sensitivity increases with an increase in total numbers of viewers, the frequency of viewing (e.g., daily or seasonally), and the duration of views (i.e., how long a scene is viewed). The criteria for identifying importance of views are related in part to the viewer's position relative to the resource. An area of the landscape that is visible from a particular location (e.g., a park or overlook) or series of points (e.g., a road or trail) is defined as a viewshed.

To quantify the quality of views, a viewshed may be broken into distance zones of foreground, middleground, and background. Generally, the dominance and importance of an object increases with its proximity to the viewer. Although distance zones in viewsheds may vary between different geographic regions or types of terrain, a commonly used set of criteria identifies the *foreground* distance zone as one-quarter to one-half of 1 mile from the viewer, the *middleground* distance zone as extending from the foreground zone to 3 to 5 miles from the viewer, and the *background* zone as extending from the middleground zone to infinity (USFS 1974~~95~~). Also, resources that are higher in elevation than the viewer tend generally to take on greater visual importance than resources located at a lower elevation than the viewer.

Visual sensitivity can also change based on the activity of the viewer. For instance, visual sensitivity is generally higher for views seen by people from their homes, driving for pleasure, or engaging in recreational or leisure activities. Visual sensitivity generally would be diminished if the same people were exposed to the same viewshed while working, engaging in personal business activities, or commuting to or from work. (USFS 1995; FHWA_1988~~4~~; US Soil Conservation Service 1978)

Much of the proposed project would be located within rolling terrain, which limits both the visibility and duration of views of the proposed project in many areas in the vicinity of sensitive viewers. However, some portions of the proposed project would be visible from residences, scenic travel routes, and several recreation areas such as parks, schools, and trails with high viewer sensitivity. Baseline visual sensitivity for each landscape unit is described in Section 4.1.1.5.

Key Terms

Landscape unit – an area of distinct landscape character that forms a spatially enclosed environment.

Region of influence – surrounding areas with views of the proposed project.

Visual sensitivity – one's receptiveness to elements in the environment. Influenced by viewer group, awareness, and proximity to an element.

Viewer group – a class of viewers differentiated by their response to the proposed project and its setting; response is affected by viewer activity, awareness, and values.

Viewshed – the expanse that can be viewed from a given location.

4.1.1.3 Viewer Groups

As discussed above, viewer awareness and concern for changes in the landscape can vary depending on the primary activity in which the viewer is engaged (USFS 1995; FHWA1988; US Soil Conservation Service 1978). Therefore, viewer groups identified below are defined based on primary viewing activities such as residential viewers, recreationists, and motorists on scenic roads. Viewer groups are described in terms of their physical location in relation to components of the proposed project, the number of viewers, the duration of views, and viewer sensitivity, which takes into account viewer activity and awareness, local values, and cultural values. Generally, increased visual contrast within foreground distances would be more noticeable to viewers than increased visual contrast within background distance zones.

For the proposed project, potentially affected groups with high viewer sensitivity include motorists on two eligible State Scenic Highways (Interstate 15 and State Route 74 [SR-74]; Caltrans 2014) and local roads; residents of the cities of San Juan Capistrano and San Clemente; dispersed rural residents in unincorporated Orange County; tourists; and dispersed recreational users, including equestrian users, cyclists, and local trail system users.

Motorists driving along Interstate 15 would have foreground and middleground views of the proposed project's transmission structures and transmission lines (Segment 1b) where they cross the freeway before entering San Juan Capistrano Substation. Motorists on SR-74, a heavily used commuter freeway with a posted speed limit of 55 miles per hour, would have foreground views of Transmission Line Segment 1b. Segments of the 230-kilovolt (kV) transmission line would be routed alongside or would cross numerous local roadways in the cities of San Juan Capistrano and San Clemente, as well as in unincorporated Orange County. All arterial roadways in the City of San Juan Capistrano are classified as scenic travel routes, and motorists in these areas may have high viewer sensitivity due to the greater level of viewer concern associated with these areas. City of San Juan Capistrano scenic travel routes are listed in Section 4.15, "Transportation and Traffic." Motorists on local streets, particularly in residential areas, may be especially sensitive to visual changes due to the increased frequency of views and slower speeds.

Residents of the cities of San Juan Capistrano and San Clemente would have views of 230-kV transmission line segments, and dispersed rural residences in unincorporated Orange County would have views of Talega Substation and the San Juan Capistrano Substation. Access roads and laydown areas would also be visible from many of the residential communities along the route. Due to frequent, stationary views, local residents are typically more sensitive than other groups to visual changes.

Recreational groups that would have views of the proposed project include users of local trails (hikers, cyclists, and equestrians). Students at nearby schools, visitors to nearby parks, and golfers would also have views of the new transmission structures and lines. The proposed project would be collocated in a right-of-way (ROW) with similar transmission structures, adding to the amount of contrast recreational user groups already experience.

As discussed in Section 4.5, "Cultural Resources," there are a number of locations within the proposed project area that are considered culturally significant. The sensitivity of groups associated with or aware of nearby cultural resources and cultural resources at other locations within the proposed project area would be high (see Section 4.5, "Cultural Resources").

4.1.1.4 Scenic Vistas and Routes

A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public (City of Orange 2009). The City of San Clemente's General Plan (2014)

1 identifies two scenic vistas, one at the terminus of the Rancho San Clemente trail above Calle del Cerro,
2 and the other on the Forester Ranch Ridgeline Trail above Avenida Vista Hermosa. Both scenic vistas
3 may include views of the existing 138-kV transmission line ROW and the proposed double-circuit 230-
4 kV transmission line. The City of San Clemente’s General Plan encourages agencies with jurisdiction
5 over discretionary permitting processes to “ preserve and improve the view corridors...” identified in the
6 General Plan as part of their approval process (City of San Clemente 2014). Figure 4.1-1 shows the
7 locations of scenic vistas and routes in the proposed project area.

8
9 Additionally, the Community Design Element of the City of San Juan Capistrano’s General Plan (1999)
10 designates all arterial roadways in the city as scenic corridors. A list of arterial roadways within the city
11 of San Juan Capistrano can be found in Tables 4.15-1 and 4.15-2.

12 13 **4.1.1.5 Existing Visual Character and Quality: Landscape Units**

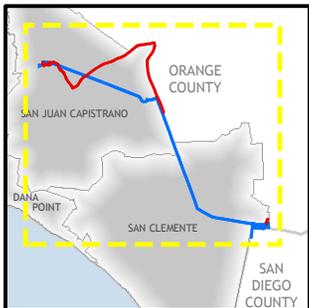
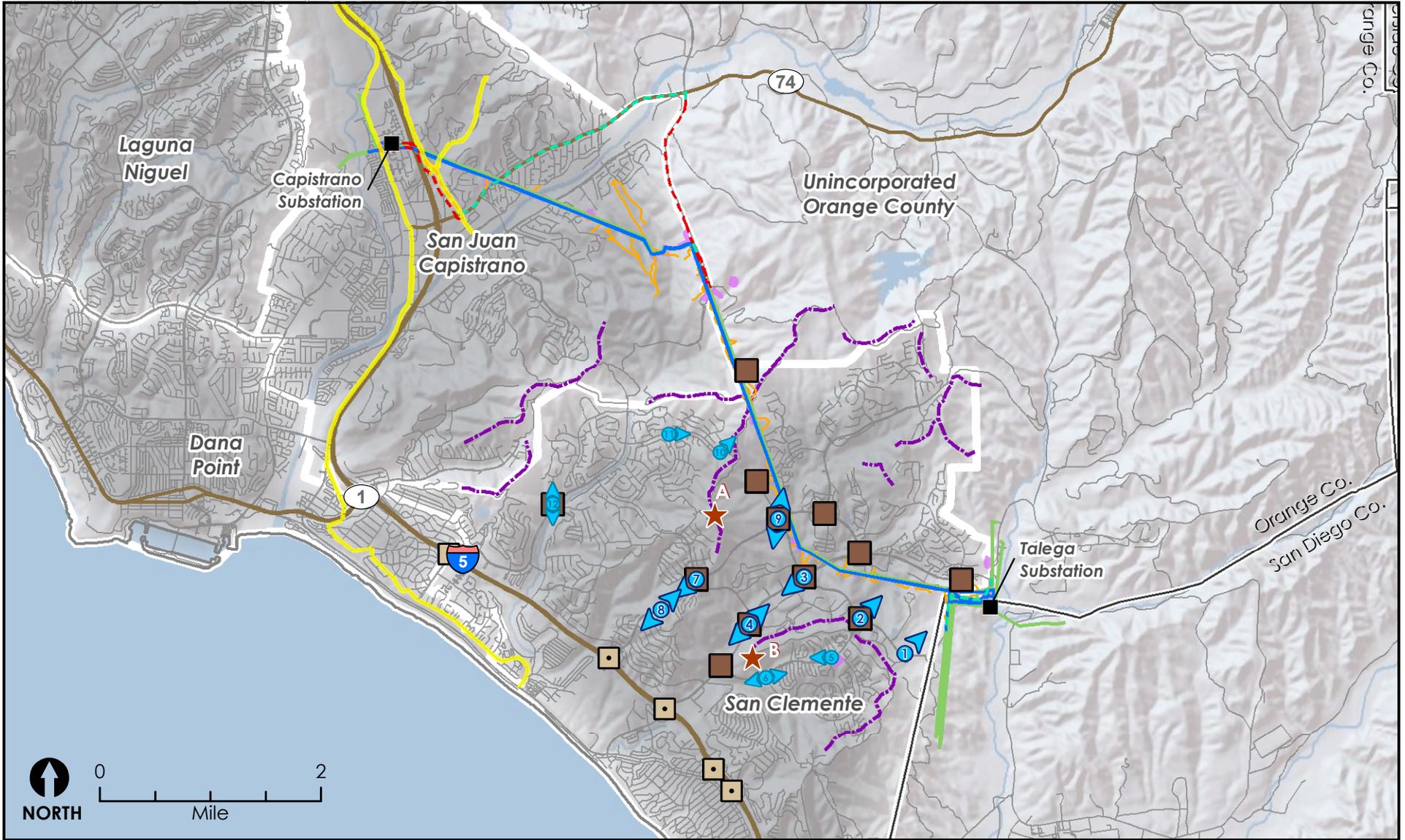
14
15 The FHWA uses landscape units to subdivide large corridors into smaller units, each consisting of a
16 homogeneous landscape type, or an enclosed space (FHWA 1988[±]). The ridgelines of the ROI have been
17 used in combination with municipal boundaries and viewer groups to subdivide the ROI into four
18 landscape units (Figure 4.1-2):

- 19 • Landscape Unit 1 (LU 1) – Capistrano Substation to Paseo Boveda
- 20 • Landscape Unit 2 (LU 2) – San Juan Creek
- 21 • Landscape Unit 3 (LU 3) – West La Ronda to Forester Ridge
- 22 • Landscape Unit 4 (LU 4) – San Clemente and Talega Substation

23
24
25 A description of the existing visual character and quality of each landscape unit is provided below, along
26 with photographs and descriptions of representative viewpoints within each landscape unit and the visual
27 character and visual quality experienced by potentially affected user groups. Views for a specific viewer
28 group, such as golfers or residents, would be similar across landscape units. Representative photographs
29 were selected to ensure that the views of each user group and landscape unit are included while
30 minimizing the number of redundant descriptions. Representative views are also limited to views from
31 public points of observation. Therefore, discrete views from private residences and golf clubs have not
32 been used to establish the existing visual setting.

33 34 **Landscape Unit 1 –Capistrano Substation to Paseo Boveda**

35 LU 1 largely comprises various residential neighborhoods within the city of San Juan Capistrano, as well
36 as Interstate 5 (I-5), golf courses, hiking trails, and parks. Relevant project-related infrastructure within
37 LU 1 includes Capistrano Substation and the existing 138-kV transmission line ROW. As shown in
38 Figure 4.1-3 and Photo 1, ridgelines to the east and west are prominent features of this landscape unit.
39 These ridges enclose LU 1 and serve as a visual barrier between landscape units. Residents and
40 recreational users within LU 1 typically experience longer duration views and have high levels of visual
41 sensitivity. Motorists on I-5 experience short duration views, typically of distant viewsheds, and have
42 low visual sensitivity.



- Proposed transmission line
- Existing transmission line
- Existing distribution line
- Proposed distribution line
- Access road
- Staging areas, stringing sites, work areas, and helicopter fly yards
- Urban area
- Roads
- Freeway gateways

- Scenic Resources (City of San Clemente)
- Other gateways
 - Scenic Vista
 - Major View Corridor
 - Minor View Corridor
 - Freeway gateways
 - Scenic Routes
 - Significant Ridgelines

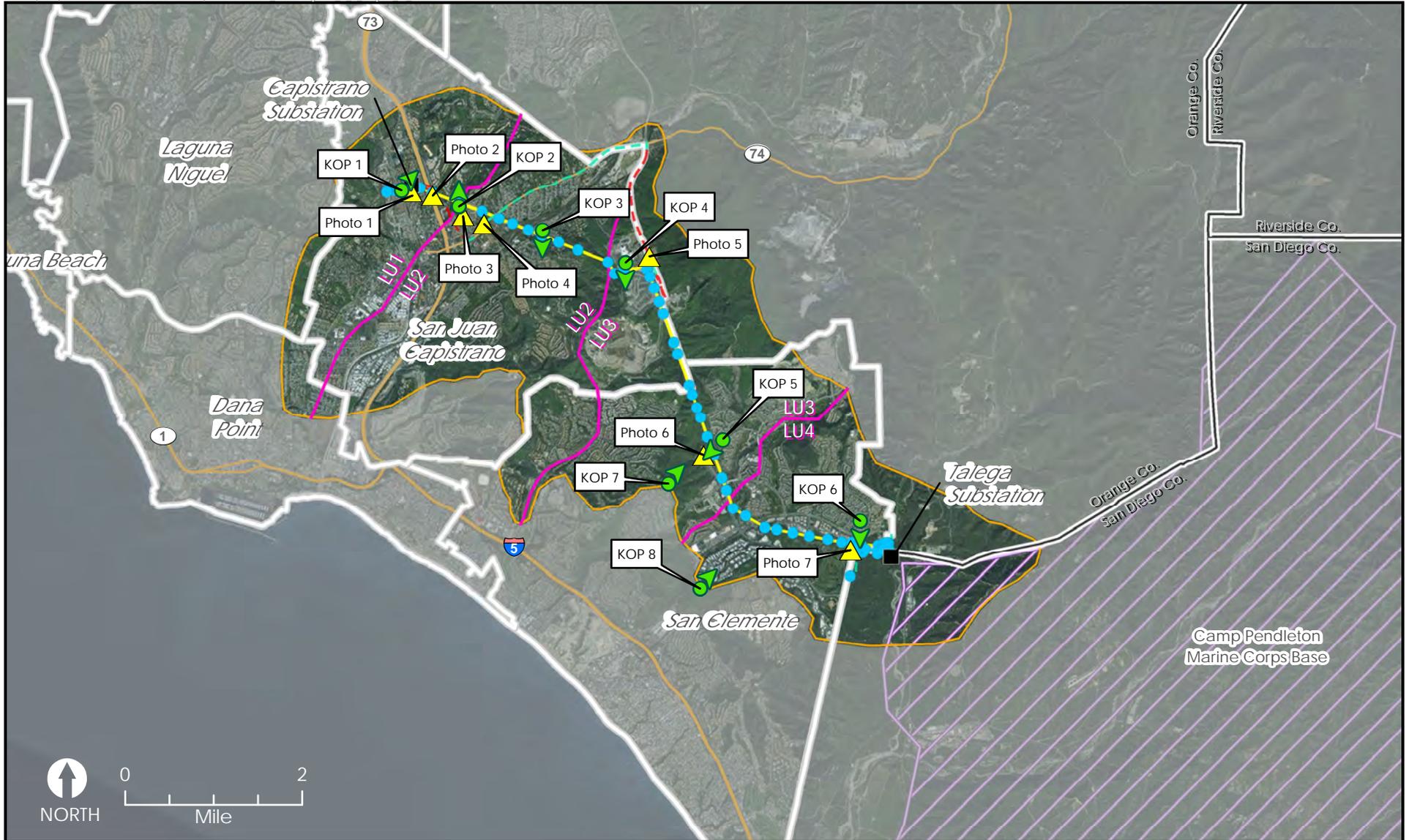
Sources: ESRI, 2010

Figure 4.1-1

Scenic Vistas and Routes in the Proposed Project Area

South Orange County Reliability Enhancement Project

(October 13, 2015 Revision)



- ▶ KOP and Direction
- ▲ Photo
- ~ Landscape Units
- ~ Region of Influence Boundary
- New pole location
- - - Proposed double-circuit 230-kV transmission line route
- - - Existing Distribution Line
- - - Proposed Distribution Line
- Substation
- ~ Major roads
- ~ Local road
- ~ County Boundary
- Urban area

Sources: E&E 2014

Figure 4.1-2

Region of Influence and Landscape Units

South Orange County Reliability Enhancement Project

Source: Fig. 4.1-3c, Photo Number 5, South Orange County Reliability Enhancement Project, SDG&E and Environmental Vision, 2012



Photo 1 – View looking north-northwest from Via el Rosario to the Capistrano Substation

Source: Fig. 4.1-3c, Photo Number 10, South Orange County Reliability Enhancement Project, SDG&E and Environmental Vision, 2012



Photo 2 – View looking north along Interstate 5

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Figure 4.1- 3
Landscape Unit 1 Representative Photos
Capistrano Substation to Paseo Boveda
South Orange County Reliability Enhancement Project

1
2 **Photo 1 Capistrano Substation**

3 Photo 1 (Figure 4.1-3) looks north-northwest from Via El Rosario and shows Capistrano Substation as a
4 focal point in the landscape, with the large vertical transmission structures obscuring distant views of
5 landscape features. The foreground and middleground are dominated by single and multi-story buildings
6 and landscape trees and shrubs that transition to rolling terrain in the distance. Complex lines and
7 textures created by the structures and vegetation along the periphery of the view create an axis in the
8 middle of the view down Via el Rosario to the substation. Prominent colors include grey greens, brick
9 red, whites, and concrete greys from vegetation and structures in the foreground. Visual intactness and
10 unity are moderate to low, as the vertical transmission structures and substation equipment encroach on
11 the cohesive neighborhood views. Neither the substation nor the neighborhood contain distinct visual
12 elements.

13
14 Viewer activity in this area is highly variable, ranging from motorists on residential roadways, who
15 experience relatively short duration views, to residents who likely experience long duration views from
16 their homes. Views in this area include motion in the foreground in the form of cars, bikes, and
17 pedestrians.

18
19 **Photo 2 – Interstate-5**

20 Photo 2 (Figure 4.1-3) looks north along northbound I-5 and shows an open landscape dominated by the
21 band of concrete in the foreground and divides views of middleground features. Complex lines and colors
22 are observed along the periphery of the landscape in the form of trees, shrubs, and signage. The large
23 vertical transmission structures on the western side of the interstate are silhouetted against the blue sky,
24 increasing their prominence. The foreground and middleground are dominated by the smooth geometric
25 forms of the highway, while distant views are blocked by the rolling terrain and berms on the flanks of
26 the highway. Prominent colors include concrete grey, greens, and whites from structures and vegetation
27 in the foreground. The highway provides a consistent landscape element from which long duration views
28 of distant landscape are observed, creating a moderately intact and unified landscape.

29
30 Viewer activity in this area would be solely made up of motorists on I-5, who experience relatively short
31 duration views within the landscape due to the speed at which they are generally moving. Both speed and
32 roadway design influence motorists' perception of the surrounding landscape. Generally, as the speed of
33 a vehicle increases, the occupant's focus becomes increasingly narrow. For instance, at speeds above 60
34 miles per hour the field of vision for the driver can be less than 40 degrees, with a focal point over 2,000
35 feet in front of the vehicle (Motloch 2001). Highway motorists are therefore continually viewing distant
36 landscapes and have difficulty perceiving changes in fore- or middle-ground views.

37
38 **Landscape Unit 2 – San Juan Creek**

39 LU 2 comprises various residential neighborhoods within the eastern portion of the city of San Juan
40 Capistrano, golf courses, hiking trails, and parks. Relevant project-related infrastructure within LU 2
41 includes existing 138-kV transmission line ROW. LU 2 is bounded by ridgelines on both sides, with San
42 Juan Creek running through its center. Residents and recreational users within LU 2 typically experience
43 views for a longer duration and have high levels of visual sensitivity.

1 **Photo 3 – Calle de la Rosa**

2 Photo 3 (Figure 4.1-4) looks north from Calle de La Rosa. Photo 3 is a focal landscape, with the large
3 vertical transmission structures silhouetted against the blue sky. The foreground and middle-ground are
4 dominated by single and multi-story buildings and ornamental landscaping. The complex geometric lines
5 and uniform textures created by the structures dominate weaker landscape features, which are relatively
6 short and sparse. Prominent colors include brick red, terra cotta browns, light yellows, whites, and
7 concrete and dark asphalt greys. There is no clear line or transition between the natural and built
8 environment, and the transmission structures at the top of the hill encroach upon the neighborhood
9 setting, resulting in moderate to low levels of visual intactness.

10
11 The location of the existing transmission structures at the apex of the hill, angle of view at above eye
12 level, and ability of the viewer to gauge the relative size of each structure, all affect viewer perception.
13 Viewer activity in this area is also highly variable, ranging from motorists on residential roadways, who
14 will experience relatively short duration views, to residents who likely experience long duration views
15 from their homes. Views in this area may also include motion in the foreground in the form of cars,
16 bikes, and pedestrians.

17
18 **Photo 4 – State Route-74**

19 Photo 4 (Figure 4.1-4) looks northeast from SR-74. Photo 4 shows an enclosed canopied landscape where
20 the features of the roadway, transmission structures, and landform are all balanced. Complex lines from
21 the built environment are slightly more noticeable than vegetation and landform. The large vertical
22 transmission structures on the western side of the highway are silhouetted against the blue sky but do not
23 dominate the view. The fore- and middle-grounds are dominated by the smooth geometric forms of the
24 highway, while distant views are blocked by the rolling terrain, and berms on the flanks of the highway.
25 These features make the landscape appear intact.

26
27 The smooth texture of the pavement is contrasted by the coarse texture of the trees, adding visual
28 interest. Prominent colors include concrete grey, greens, and whites from vegetation and structures in the
29 foreground. The vividness of the colors and the landscape would likely change with the seasons. Views
30 of the natural surroundings are confined but unobstructed, resulting in moderate to high degree of visual
31 unity.

32
33 The expansive interstate and views of objects moving rapidly at or above eye level affect viewer
34 perception. Viewer activity in this area would consist of both recreational and commuting motorists on
35 SR-74, who would experience views for a relatively short duration and have low to moderate viewer
36 sensitivity, as well as residential viewers who would experience long duration views and higher viewer
37 sensitivity.

38
39 **Landscape Unit 3 – West La Ronda to Forester Ridge**

40 LU 3 comprises rural areas in unincorporated Orange County, San Juan Hills High School, Prima
41 Deschecha Landfill, and recreational trails. Relevant project-related infrastructure within LU 3 includes
42 existing 138-kV transmission line ROW. Of the four landscape units, LU 3 has the least residential
43 development. Ridgelines to the west divide LU 2 from LU3. Residents, viewers at San Juan Hills High
44 School, and recreational users within LU 3 experience views for a longer duration and have high levels
45 of visual sensitivity.



Photo 3 – Calle de Rosa



Photo 4 – Highway 74

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Figure 4.1-4
Landscape Unit 2 Representative Photos
San Juan Creek
South Orange County Reliability Enhancement Project

1 **Photo 5 - ~~Avenida la Pata~~La Pata Avenue**

2 Photo 5 (Figure 4.1-5) ~~lookss~~shows the view looking south ~~along from Avenida la Pata~~ La Pata Avenue in
3 ~~the City of San Juan Capistrano. Avenida la Pata is identified as a major view corridor by the City of San~~
4 ~~Clemente's General Plan (City of San Clemente 2014).~~ Photo 5 shows a focal landscape of the existing
5 138-kV transmission line ROW. The view is bisected by ~~Avenida la Pata~~La Pata Avenue, with the linear
6 features of the road, guardrail, and adjacent transmission structures converging, leading the viewer's eye
7 towards a notch on the ridgeline. These linear features also create an edge between the natural landforms
8 in the east (left side of the photo) and the seemingly more developed landscape in the west (right side of
9 the photo), which leads to a higher level of visual intactness. The vegetation on the periphery of the view
10 is smooth and uniform, while the vertical transmission structures and their horizontally oriented lines
11 lend an ordered, geometric complexity that subdivides the view. The lines of landforms are slightly
12 dominant over vertical lines from transmission structures and foreground structures.

13
14 Viewer perceptions are affected by the location of the existing 138-kV transmission line ROW in the
15 fore- and middle-grounds, angle of view at and above eye level, and stark contrast between rigid vertical
16 structures against the soft rolling hills in the fore- and middle-grounds. Viewer activity in this area would
17 consist largely of recreational users experiencing views for a long duration with high viewer sensitivity.
18 Similar views with shorter viewing durations are likely experienced by motorists, cyclists, and
19 pedestrians with high viewer sensitivity traveling on ~~Avenida la Pata~~La Pata Avenue.

20
21 **Photo 6 – Calle Saluda**

22 Photo 6 (Figure 4.1-5) looks northeast from Calle Saluda. The fore- and middle-grounds are dominated
23 by rolling terrain and uniform vegetation that is broken up by the ridged vertical forms of the existing
24 transmission structures and the ordered geometric forms of the adjacent housing development. Minor
25 variation in the color and texture of the vegetation creates visual interest, while the solid forms to the east
26 (right) create a transitional edge between developed and rural landscapes. The blooming flowers make
27 the adjacent foreground colors increasingly vivid, but this expression of color would be seasonally
28 dependent. The landscape is relatively intact and uniform, with the transmission structures forming a
29 functional edge between the open landscape and the residential development. The transmission structures
30 are a dominant feature in the landscape in this view because of their prominence and strong contrast in
31 form and line with the existing more natural features in the landscape and the low, more rectilinear
32 residences and curving paths.

33
34 Viewer perceptions are affected by the location of the existing 138-kV transmission line ROW, angle of
35 view at and above eye level, and atmospheric conditions. Viewer activity in this area would involve
36 motorists, residents, and recreational users of the adjacent hiking trails. Motorists and recreational users
37 on nearby trails and parks would experience shorter duration views, with recreational users having higher
38 awareness of the views. Local residents would experience long duration views and have high awareness
39 and local values.

40
41 **Landscape Unit 4 – San Clemente and Talega Substation**

42 LU4 includes two golf courses, Talega Substation, several existing transmission lines, residential
43 communities within the city of San Clemente, and the northern portion of Marine Corps Base (MCB)
44 Camp Pendleton. Viewer groups include the residents of homes within the ROI, motorists, military
45 personnel, and recreational user groups. Residents and recreational uses typically experience long
46 duration views and have higher visual sensitivity, while motorists experience shorter duration views and
47 have lower visual sensitivity.



Photo 5 – Avenida la Pata La Pata Avenue



Photo 6 – Calle Saluda

Figure 4.1-5
Landscape Unit 3 Representative Photos
West La Ronda to Forester Ridge
South Orange County Reliability Enhancement Project

1 Photo 7 (Figure 4.1-6) looks southeast from Bella Towne and Golf Club. The fore- and middle-grounds
2 are dominated by rolling terrain, which is broken up by the ridged vertical forms of the transmission
3 structures. The transmission structures are the dominant landscape features in the fore- and middle-
4 ground. Variations in the color and the coarse texture of the vegetation in the foreground transition to
5 soft and homogenous in the middle and distant views. The expanse of the view, with few manmade
6 developments, is striking when compared to views within the area that consist of closed views within
7 residential communities. The landscape is relatively intact and uniform, with the exception of the existing
8 transmission structures, which detract substantially from the view's overall intactness.

9
10 Viewer perceptions are affected by the location of the existing 138-kV transmission line ROW, angle of
11 view at and above eye level, and stark contrast between rigid vertical structures in the fore- and middle-
12 grounds against the soft rolling hills. Viewer activity in this area would be largely composed of
13 recreational users with long duration views. Similar views with a shorter viewing duration are likely
14 experienced by motorists traveling on Avenida la Pata and Avenida Pico, which are identified as major
15 view corridors by the City of San Clemente's General Plan (Figure 4.1-2; City of San Clemente 2014).

16 17 **4.1.2 Regulatory Setting**

18 19 **4.1.2.1 Federal**

20 21 **United States Marine Corps - Camp Pendleton**

22 The United States Navy has developed a Base Exterior Architecture Plan (BEAP) for MCB Pendleton.
23 This plan includes objectives and guidelines for ensuring that MCB Camp Pendleton's development is
24 both functional and visually cohesive (USMC 2010). The following objectives and guidelines of the
25 BEAP apply to the proposed project:

26 27 **Objectives**

- 28 • *Place electrical utilities underground wherever possible.*
- 29 • *Screen imposing utilities such as electrical substations, transformers, propane tanks, and other*
30 *highly visible utilities.*
- 31 • *Improve and provide storm drain systems.*

32 33 **Guidelines**

- 34 • *Locate all power and telephone distribution lines underground where possible.*
- 35 • *Screen existing substations and transformers with solid walls and planting.*
- 36 • *Locate future substations in low visibility areas.*
- 37 • *Locate all power and telephone lines within current or future easement areas.*



Photo 7 – Bella Collina Towne and Golf Club

Figure 4.1-6

Landscape Unit 4 Representative Photo
San Clemente and Talega Substation
South Orange County Reliability Enhancement Project

1 Section 4.29 of the BEAP contains the following recommendations for the development of utilities in the
2 Talega area:

- 3
- 4 • *Develop a survey and analysis of the existing above grade utilities and prepare a long range*
5 *plan to underground these facilities.*
- 6 • *Place utilities underground per the Utility Details and Standards in Section 8.11 (of the BEAP).*
- 7 • *Provide ROW easements for these utilities in streets or alleys.*
- 8 • *Minimize utility easements through development or open space areas.*
9

10 **4.1.2.2 State**

11 **State Scenic Highways**

12
13 The California Department of Transportation administers the State Scenic Highway Program to preserve
14 and protect scenic highway corridors from changes that would diminish the aesthetic value of lands
15 adjacent to highways (California Streets and Highways Code Sections 260 et seq.). The State Scenic
16 Highway Program includes a list of highways that are designated as scenic highways or are eligible or
17 this designation. The program entails the regulation of land use and density of development, attention to
18 the design of sites and structures; attention to and control of signage, landscaping, and grading; and the
19 undergrounding of utility lines within the view corridor of designated scenic roadways. A highway may
20 be designated scenic depending upon how much of the natural landscape can be seen by travelers, the
21 scenic quality of the landscape, and the extent to which development intrudes upon travelers' enjoyment
22 of the view. The local jurisdiction is responsible for adopting and implementing such regulations.
23 Caltrans has designated I-5 and SR-74 as eligible State Scenic Highways (Caltrans 2012). If a highway is
24 listed as eligible for official designation, it is part of the State Scenic Highway Program, and care must be
25 taken to preserve its aesthetic character and thus its eligible status.
26

27 **4.1.2.3 Regional and Local**

28 **Orange County**

29
30 The Land Use Element of Orange County's General Plan (2005) includes the following policy pertaining
31 to aesthetics and visual resources:

- 32
- 33 • *Policy 8. Enhancement of the Environment: To guide development so that the quality of the*
34 *physical environment is enhanced. The purpose of the Enhancement of Environment Policy is to*
35 *ensure that all land use activities seek to enhance the physical environment, including the air,*
36 *water, sound levels, landscape, and plant and animal life.*
37

38 **City of San Clemente**

39 The City of San Clemente Centennial General Plan (2014) includes the following goals and policies
40 pertaining to aesthetics and visual resources:

41 **Urban Design Element:**

- 42
- 43 • *Primary Goal: Create and enhance a high-quality, built environment that protects and enhances*
44 *our treasured natural and historical resources, maintains our small town beach character,*
45 *provides accessibility to residents, employees and visitors, and distinguishes San Clemente as*
46 *the Spanish Village by the Sea.*

- 1 • *Policy UD-2.05: Public View Corridors. We require the preservation of designated public view*
2 *corridors in the design and construction of gateway area improvements.*
- 3 • *Policy UD-2.10. Visual Screening. We require visual screening of blank walls, trash dumpsters,*
4 *and parking facilities through a variety of landscaping and architectural design treatments, and*
5 *signage associated with such features must be attractively designed and placed, consistent with*
6 *sign regulations. Where possible, we require the screening of utilities infrastructure. Unsightly*
7 *properties and buildings should be visually screened in an attractive manner.*
- 8 • *Policy UD-2.11: Overhead Utilities. We encourage the undergrounding of overhead utilities*
9 *infrastructure in gateway areas and encourage the formation of assessment districts.*
- 10 • *Policy UD-3.05: Infrastructure Compatibility. We require public infrastructure and related*
11 *facilities or equipment to be aesthetically pleasing and in context with the community character.*

12 **Mobility and Complete Streets Element:**

- 13 • *Goal: Create a balanced transportation network that provides mobility and access for all modes*
14 *of travel, including motor vehicles, transit, bicyclists, pedestrians, and rail traffic.*
- 15 • *Policy M-1.30: Protection of Scenic Corridors. We ensure that development is sited and*
16 *designed to protect scenic corridors and open space/landscape areas by blending man-made and*
17 *man-introduced features with the natural environment.*

18 **Beaches, Parks and Recreation Element:**

- 19 • *Open Space and Trails Goal: Provide a safe, environmentally sustainable and attractive open*
20 *space and trails network, including walking, bicycling, hiking and equestrian trails, that*
21 *connects key open space areas and recreational amenities.*
- 22 • *Policy BPR-4.01: Open Space Preservation. We encourage and support the preservation of open*
23 *space within and adjacent to the City.*

24 **Natural Resources Element – Aesthetics:**

- 25 • *Goal: Preserve natural aesthetic resources of the City, including coastal bluffs, beaches, visually*
26 *significant ridgelines, coastal canyons and significant public view corridors.*
- 27 • *Policy NR-2.07: Underground Utilities. The City will develop and implement a utilities*
28 *undergrounding plan to avoid the adverse impacts to aesthetic resources caused by public*
29 *utilities and unmanned telecommunications facilities, where feasible and where costs of such*
30 *undergrounding does not pose economic hardship. Where undergrounding is determined by the*
31 *City to not be physically possible, such features shall be located and designed to reduce their*
32 *visibility and in developed areas, consistent with prevailing architectural character and scale. In*
33 *beaches, parks and open spaces areas, such facilities shall be designed and located to blend in*
34 *with natural colors, textures and landforms.*
- 35 • *Policy NR-2.09: Public View Corridors. The City will preserve and improve the view corridors,*
36 *as designated in Figures NR-1 and NR-2 and encourage other agencies with jurisdiction to do*
37 *so. Specifically, in its capital improvement programs and discretionary approvals, the City will*
38 *seek to ensure that:*
39
40 *a. Development projects shall require a view analysis to ensure they do not negatively impact a*
41 *public view corridor.*

- 1 b. *Utilities, traffic signals, and public and private signs and lights shall not obstruct or clutter*
2 *views, consistent with safety needs.*
- 3 c. *Where important vistas of distant landscape features occur along streets, street trees shall be*
4 *selected and planted so as to facilitate viewing of the distant features.*
5

6 **City of San Juan Capistrano**

7 The Community Design Element of the City of San Juan Capistrano’s General Plan (1999) includes goals
8 to enhance and define the community identity and sense of place. The Community Design Element
9 designates all arterials within the city as scenic corridors, and the following goal and policies are
10 applicable to the proposed project.
11

- 12 • **Goal 3:** *Preserve and enhance natural features*
- 13 • **Policy 3.3:** *Preserve and enhance scenic transportation corridors, including I-5 and the*
14 *railroad.*
- 15 • **Policy 3.4:** *Preserve important viewsheds.*
16

17 The following design criterion is provided to ensure that these scenic corridors are developed with a
18 sense of care to aesthetic values:
19

- 20 • *Buffer to screen existing unsightly features outside of the ROW. Use of innovative design*
21 *features: for bicycle, sidewalks, equestrian trails, boundary walls, and parkways. Attention to*
22 *building design features that are proposed adjacent to a scenic corridor.*
23

24 The Conservation and Open Space Element of the City of San Juan Capistrano’s General Plan includes
25 the following goal and policy regarding visual quality:
26

- 27 • **Goal 4:** *Prevent incompatible development in areas which should be preserved for scenic,*
28 *historic, conservation or public safety purposes.*
- 29 • **Policy 4.1:** *Assure incompatible development is avoided in those areas.*
30

31 The Community Design Element of the San Capistrano’s General Plan works in conjunction with the
32 plan’s Land Use Element, which includes the following goal and policies pertaining to aesthetics:
33

- 34 • **Goal 7:** *Enhance and maintain the character of neighborhoods.*
- 35 • **Policy 7.1:** *Preserve and enhance the quality of San Juan Capistrano neighborhoods by avoiding*
36 *or abating the intrusion of non-conforming buildings and uses.*
- 37 • **Policy 7.2:** *Ensure that new development is compatible with the physical characteristics of its*
38 *site, surrounding land uses, and available public infrastructure.*
- 39 • **Policy 7.3:** *Utilize programs for rehabilitation of physical development, infrastructure and*
40 *undergrounding of utilities within the City to improve community neighborhoods.*
- 41 • **Policy 7.4:** *Protect the existing population and social character of older areas subject to*
42 *rehabilitation and redevelopment.*
43

1 **4.1.3 Impact Analysis**

2
3 **4.1.3.1 Significance Criteria**

4
5 As discussed in Section 4.1.1.1, the methodology used for this visual assessment is based on the FHWA’s
6 visual impact assessment system (FHWA 1988~~4~~). The significance criteria used to identify aesthetic
7 impacts is from Appendix G of the California Environmental Quality Act Guidelines (2014). The
8 proposed project would cause a significant impact on aesthetic resources if it would:
9

- 10 a) Have a substantial adverse effect on a scenic vista;
- 11 b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings,
12 and historic buildings within a State Scenic Highway;
- 13 c) Substantially degrade the exiting visual character or quality of the site and its surroundings; or
- 14 d) Create a new source of substantial light or glare which would adversely affect day or nighttime
15 views in the area.
16

17 The existing setting and regulatory overview provide a baseline for assessing impacts on the following:
18

- 19 • Visual resources (i.e., visual character and quality) of the region and the immediate project area;
- 20 • Important viewing locations (e.g., roads, trails, and overlooks) and the general visibility of the
21 project area and the site using descriptions and photographs;
- 22 • Viewer groups and their sensitivity; and
- 23 • Relevant federal, state, and local government policies and concerns for protection of visual
24 resources.
25

26 **Key Viewpoints**

27 The KOPs presented in this section represent typical views from sensitive locations. The location and
28 view direction for each KOP with respect to components of the proposed project are shown on Figure
29 4.1-2. As identified in the FHWA Visual Impact Assessment for Highway Projects methodology, a visual
30 simulation was prepared for each KOP to depict views as they would appear during the operation of the
31 proposed project. The visual simulations were produced by the applicant using computer modeling and
32 rendering techniques to illustrate the visual change associated with the proposed project as seen from
33 publicly accessible KOPs within the ROI. The methodologies used to produce the simulations are
34 described in greater detail in the proponent environmental assessment (SDG&E 2012).
35

36 **4.1.3.2 Applicant Proposed Measures**

37
38 The applicant has committed to the following applicant proposed measures (APMs) as part of the design
39 of the proposed project. See Section 2.6, “Applicant Procedures, Plans, Standards, and Proposed
40 Measures,” for a complete description of each project commitment.
41

42 **APM AES-1: Clean Work Areas.** During construction, SDG&E would keep construction activities
43 as clean and inconspicuous as practical.

44 **APM AES-2: Restoring Disturbed Areas.** When proposed project construction has been completed
45 all disturbed terrain would be restored through recountouring and revegetation in order to re-establish

1 a natural appearing landscape and reduce potential visual contrasts between disturbed areas and the
2 surrounding landscape.

3 **APM AES-3: Visual Screening - San Juan Capistrano Substation.** The applicant would install
4 landscaping and a screening wall would be installed in key areas along the perimeter of San Juan
5 Capistrano Substation to partially screen views of substation structures and to visually integrate the
6 new substation facilities with the existing setting. Figure 2-4 depicts the general location of new
7 substation landscaping. Plant material would be appropriate to site-specific conditions and the local
8 landscape setting. Landscaping would be consistent with technical requirements for proposed project
9 operations and maintenance and would incorporate input from the City of San Juan Capistrano, local
10 residents, and SDG&E's facility security.

11 12 **4.1.3.3 Environmental Impacts**

13
14 **Impact AE-1: Substantial adverse effect on a scenic vista.**
15 *LESS THAN SIGNIFICANT WITH MITIGATION*

16
17 As discussed in Section 4.1.1.4, "Scenic Vistas and Corridors," the proposed project would be located
18 within the cities of San Juan Capistrano and San Clemente, as well as unincorporated Orange County.
19 The City of San Clemente's General Plan identifies two scenic vistas, various gateways, and 20 view
20 corridors, while the City of San Juan Capistrano's General Plan treats any view from an arterial roadway
21 as a scenic vista. Orange County's General Plan does not identify any scenic vistas.

22 23 **Construction**

24 During construction, the following activities would be visible to sensitive viewer groups: removal of
25 vegetation, construction of buildings, removal of distribution and transmission structures, grading and
26 excavation of footings, trenching to install underground conduit, and clearing and grading associated
27 with the establishment of new access roads and staging areas. The majority of these activities would
28 require the use of various types of construction-related heavy equipment and the presence of construction
29 personnel. Visual impacts on scenic vistas, gateways, and corridors associated with the construction
30 phase of the proposed project would occur throughout the project ROW over a 64-month period.
31 Appendix G of this EIR provides a detailed schedule for individual construction activities, by location.
32 As discussed in Chapter 2, the exact sequencing of proposed construction is contingent upon local
33 electricity demands and weather.

34
35 During construction, the applicant would temporarily disturb up to 49 acres within and adjacent to the
36 proposed double-circuit 230-kV transmission line. Temporary disturbance areas would include staging
37 areas; laydown areas (transmission structure work areas); and conductor cable pull, tension, reel, and
38 splicing sites (wire stringing sites). All work associated with the Talega and proposed San Juan
39 Capistrano substations would be conducted within each substation's fence line. In addition to ground
40 disturbing activities, visual impacts would also result from the presence of construction vehicles and
41 equipment. The presence of construction equipment, views of construction activities, and increased
42 visual contrast due to storage of construction materials could result in a significant impact on scenic
43 vistas, gateways, and view corridors through the introduction of new sources of visual contrast. These
44 new sources of visual contrast would adversely affect the intactness and unity of landscapes observable
45 from scenic vistas and view corridors, resulting in potentially significant impacts.

46
47 Visual impacts associated with construction of the proposed project would be localized and short term.
48 These short-term impacts on scenic vistas, gateways, and view corridors would be reduced with the
49 implementation of APM AES-1 and APM AES-2, which would require the applicant to keep all

1 worksites clean and restore disturbed areas to their pre-construction appearance as soon as possible.
2 However, visual impacts associated with construction would remain significant because equipment
3 would still be visible. Mitigation Measure (MM) AES-3, described further in Section 4.1.4, requires the
4 applicant to visually screen staging areas and worksites and MM AES-2 requires the applicant to
5 minimize clearing and ground disturbance and restore disturbed areas to pre-project conditions.
6 Implementation of MM AES-3 and MM AES-2 would reduce visual impacts on scenic vistas, gateways,
7 and view corridors to a less than significant level. Reducing both the duration and intensity of
8 construction activities observable from scenic vistas, gateways, and view corridors would mitigate
9 potential visual impacts during the construction phase of the project. Therefore, impacts on visual
10 resources would be less than significant with mitigation under this criterion.
11

12 Construction of Transmission Line Segment 1a, an underground 138-kV transmission line, would require
13 new underground conduit to be constructed across Camino Capistrano, which is a designated scenic
14 corridor. Short-term impacts on visual resources would result from trenching activities within Camino
15 Capistrano, as well as the presence of construction equipment and personnel. The work would be
16 conducted along a 75-foot-wide corridor and would mostly occur at or below eye level. The construction
17 of the proposed project would not introduce sources of visual contrast that would substantially affect
18 views from Camino Capistrano. Therefore, there would be no impact on the Camino Capistrano view
19 corridor from construction of Transmission Line Segment 1a.
20

21 **Operations**

22 ***Scenic Corridors (City of San Juan Capistrano)***

23 The City of San Juan Capistrano does not specifically identify any scenic vistas; however, the
24 Community Design Element specifies that all arterial roadways within the city should be treated as scenic
25 corridors. Construction activities would be visible from the following arterial roadways within LU 1 and
26 LU 2: Camino Capistrano, Rancho Viejo Road, and Golf Club Drive. The proposed project would cross
27 all of these arterial roadways within an existing utility corridor. Construction and operation of the
28 proposed project would introduce new elements of visual contrast to views along arterial roadways
29 within the Ceity of San Juan Capistrano. Additionally, the appearance of Capistrano Substation, as seen
30 from Camino Capistrano, would be altered.
31

32 The introduction of new transmission infrastructure, including transmission structures and the proposed
33 updates to the appearance of San Juan Capistrano Substation, would not degrade the visual intactness,
34 unity, or vividness of existing views from arterial roadways within the Ceity, as these facilities would be
35 located in areas with a consistent use. Transmission structures would be located within an existing
36 transmission corridor, and the portion of the parcel being used as an electrical substation would continue
37 to be used as such. Minor changes to the size, location, and orientation of proposed project facilities
38 would not substantially change the viewshed of arterial roadways within the Ceity of San Juan
39 Capistrano. Therefore, the proposed project would have a less than significant impact on visual resources
40 within the Ceity of San Juan Capistrano's scenic corridors during operation.
41

42 ***View Corridors (City of San Clemente)***

43 The City of San Clemente's General Plan identifies 12 view corridors within the proposed project's ROI.
44 These view corridors are located in LU 3 and LU 4 and typically coincide with points along arterial
45 roadways with either up-canyon or sea views (Figures 4.1-31 and 4.1-2). The General Plan states that
46 utilities, such as the proposed project, should not obstruct views from these public view corridors. The
47 three view corridors that are most likely to be impacted by construction and operation of the proposed
48 project are located along Avenida la Pata. These three view corridors—1, 2, and 9, (Figure 4.1-31)—

1 offer up-canyon views from Avenida la Pata. Existing transmission structures, and the proposed project,
2 would be visible from all three viewing locations. The remaining view corridors are either oriented
3 towards the sea and away from the project or do not include views of the proposed project due to
4 topography. LU 3 and LU 4 include two golf courses, Talega Substation, several existing transmission
5 lines, residential communities within the Ceity of San Clemente, and the northern portion of MCB Camp
6 Pendleton. Viewer groups include the residents of homes within the ROI, motorists, military personnel,
7 and recreational user groups. The view corridors (1, 2, and 9) are located along Avenida la Pata and
8 adjacent to a golf course and residential developments. Given the size and mass of the new transmission
9 structures, they would likely be visible from all three locations and have the potential to affect all of the
10 identified viewer groups.

11
12 The proposed project would introduce 45 new transmission structures in the vicinity of the potentially
13 affected view corridors. The majority of these structures, 32, would be located near Talega Substation
14 and would primarily affect View Corridor 1. All of the proposed transmission structures would be
15 located within or adjacent to an existing transmission corridor that is currently occupied by transmission
16 structures of a similar size and mass. Views in this area have a low level of unity and intactness due to
17 previous development, including the presence of existing transmission structures. The proposed project
18 would not introduce a new type of visual contrast into the viewsheds of the Ceity of San Clemente's view
19 corridors, and impacts associated with adding another line to an existing corridor would not constitute a
20 substantial source of visual contrast. Therefore, the proposed project would have a less than significant
21 impact on visual resources within the Ceity of San Clemente view corridors during operation.

22 **Gateways (City of San Clemente)**

24 The City of San Clemente's General Plan identifies Freeway Gateways and Other Gateways within the
25 City that are defined as "transitional places and visual cues that announce entrances to cities,
26 neighborhoods, or districts." The City's goal for gateways is to "Create clearly marked and aesthetically
27 pleasing entry points into San Clemente and its many unique neighborhoods and districts, and ensure that
28 such gateways incorporate quality architecture, historic resources, distinctive landscaping, signage and
29 streetscape features that create a sense of arrival and reinforce the City's identity and unique architectural
30 character." The City's goal and policies regarding gateways focus on design improvements within
31 gateway areas that reinforce the City's identity and include the preservation of designated public view
32 corridors in the design and construction of gateway area improvements (Policy UD-2.05), screening
33 views of utility infrastructure where possible (Policy UD-2.10), and encouraging undergrounding
34 overhead utilities infrastructure in gateway areas (Policy UD-2.11) (City of San Clemente 2014).

35
36 Ten of the City's twenty Other Gateways and none of the City's nine Freeway Gateways are located
37 within the proposed project's ROI (Figures 4.1-1 and 4.1-2) in LU 3 and LU 4. The proposed project
38 would be located within the foreground distance zone of eight of the Other Gateways and is likely to be
39 visible from them. The proposed project may also be visible from two Other Gateways; however, as
40 indicated in the visual simulation for KOP 8 (Figure 4.1-13²), it would not be very noticeable in these
41 views. Viewer groups with potential views of the proposed project from Other Gateways include
42 residents of homes, motorists, military personnel, and recreationists.

2 Please note that Figure 4.1-13 was placed in this section out of numerical order.



Existing View Northeast



Visual Simulation of Proposed Project

Figure 4.1-13
Existing View and Visual Simulation from Scenic Vista B
North of Calle del Cerro
South Orange County Reliability Enhancement Project

1 The proposed project would introduce new transmission structures within the foreground distance zone
2 of eight of the Other Gateways. All of the proposed transmission structures would be located within or
3 adjacent to an existing transmission corridor that is currently occupied by transmission structures of a
4 similar size and mass. Views in this area have low levels of unity and intactness due to previous
5 development, including the presence of existing transmission structures. The proposed project would not
6 introduce a new type of visual contrast into the views from the City's Other Gateways, and impacts
7 associated with adding another line to an existing corridor would not constitute a substantial source of
8 visual contrast or substantially reduce intactness, unity or vividness of views from the Other Gateways.
9 Therefore, the proposed project would have a less than significant impact on visual resources viewed
10 from within the City of San Clemente's Other Gateways during operation.
11

12 ***Scenic Vistas (City of San Clemente)***

13 The City of San Clemente's General Plan identifies two scenic vistas (Figure 4.1-31). Both of the scenic
14 vistas are located on ridgelines identified by the City of San Clemente General Plan as significant. The
15 first scenic vista (Scenic Vista B, Figure 4.1-1; KOP 8, Figure 4.1-2) is located at the terminus of the
16 Rancho San Clemente Trail and potentially has views of all of the proposed project infrastructure located
17 within LU 4 (transmission structures and modifications to Talega Substation). Figure 4.1-13 shows the
18 existing view and a simulation of the proposed project looking northeast from KOP 8. Recreational users
19 of the Rancho San Clemente Trail and nearby residents would have distant views of the proposed project
20 from this vantage point. While activities associated with the construction and operation of the proposed
21 project would be visible from these areas, they would occur within either the fence line of an existing
22 substation or an existing transmission ROW. Proposed project infrastructure would be viewed against
23 existing transmission lines and substation modifications and would not add distinguishable features to
24 views from these areas. As shown in Figure 4.1-13, the new transmission line would be visible, but
25 would not be strongly noticeable, in views from KOP 8.
26

27 The second scenic vista (Scenic Vista A, Figure 4.1-1; KOP 7, Figure 4.1-2) is located in LU 3 on the
28 Forester Ranch Ridgeline Trail above Avenida Vista Hermosa. Figure 4.1-14³ shows the existing view
29 and a simulation of the proposed project looking northeast from KOP 7. Recreational users of the
30 Forester Ranch Ridgeline Trail and nearby residents would have distant views of the proposed project
31 from this vantage point. While activities associated with the construction and operation of the proposed
32 project would be visible in ~~background~~ (distant) views from this scenic vista, they would occur within an
33 existing transmission ROW and be surrounded by development. Proposed project infrastructure would be
34 viewed against this existing landscape and would not add distinguishable features to views from these
35 areas. As shown in Figure 4.1-14, the new transmission line would be visible, but would not be strongly
36 noticeable in views from KOP 7. Therefore, the proposed project would have a less than significant
37 impact on visual resources within the Ccity of San Clemente's scenic vistas during operation.
38

³ Please note that Figure 4.1-14 was placed in this section out of numerical order.



Existing View



Visual Simulation of Proposed Project

Figure 4.1-14
**Existing View and Visual Simulation from Scenic Vista A
North of Avenida Vista Hermosa**
South Orange County Reliability Enhancement Project

1 **Impact AE-2:** **Substantially damage scenic resources, including, but not limited to, trees,**
2 **rock outcroppings, and historic buildings within a State Scenic Highway.**
3 *LESS THAN SIGNIFICANT*
4

5 **Construction**

6 Project-related construction activities would be visible from eligible state scenic highways, I-5, and SR-
7 74. The California Public Utilities Commission (CPUC) treats eligible state highways the same as
8 officially designated state scenic highways. Construction activities potentially visible from I-5 include
9 clearing and grading, removal of two existing transmission structures, and construction of two new
10 transmission structures. Work areas for the removal and installation of transmission structures would be
11 located above eye level for motorists on I-5 and would be largely obstructed due to topography and the
12 presence of vegetation. Construction activities would not damage any scenic resources visible from I-5.
13

14 The applicant would remove five ornamental trees from the north side of SR-74 to establish a permanent
15 access path to Transmission Line Pole 7. Removal of the ornamental trees would detract from the views
16 experienced along this section of SR-74. However, removal of the ornamental trees would expose views
17 of native oak trees growing on the hillside and would not add a new source of visual contrast, as an
18 access path to Transmission Line Pole 7 already exists. Additionally, motorists on SR-74 would be
19 traveling up to 40 miles per hour and would be more focused on distant views ahead than construction
20 activities occurring on the periphery of the roadway. Therefore, removal of the ornamental trees and
21 expansion of the existing access path to Transmission Line Pole 7 would not result in substantially
22 damaging views from SR-74. Construction of the proposed project would have a less than significant
23 impact on scenic resources along a state scenic highway.
24

25 **Operations**

26 Portions of Transmission Line Segment 1b would cross I-5 and SR-74 within LU 1 and LU 2. The new
27 transmission structures would replace existing structures located within the same footprint.
28

29 Adjacent to I-5, the applicant is proposing to replace two lattice towers with tubular steel poles (TSPs)
30 and install two new cable poles within an existing transmission corridor (see Figure 4.1-3, Photo 2). The
31 proposed transmission structures would mimic the design of other existing transmission structures visible
32 from I-5 in this utility corridor. Replacing the lattice structures with structures that mimic the design of
33 other existing structures would unify these features, which in turn would marginally increase the unity of
34 views from I-5. Potentially affected motorists would be traveling at speeds in excess of 60 miles per hour
35 and would be focused on distant landscape features (Motloch 2001). These motorists would have
36 difficulty perceiving the subtle change of the type of transmission structure, if they are able to detect the
37 transmission structures on the periphery of I-5 at all. Given that operation of the project would increase
38 unity within the landscape, and would be virtually undetectable by motorists traveling at highway speeds,
39 operation of the proposed project would have a less than significant impact on visual resources
40 observable from I-5.
41

42 Adjacent to SR-74, the applicant is proposing to replace two lattice towers with TSPs within an existing
43 transmission corridor. The lattice tower located closest to SR-74 is Transmission Line Pole 7 in
44 Transmission Line Segment 1b, situated about 438 feet from the highway and 56 feet above the road
45 surface on a small hill (see Figure 4.1-3, Photo 4). Views of this tower are largely obstructed by foliage,
46 with only the apex of the tower visible from the highway. Changing the type and size of the transmission
47 structure in this location would not substantially change the vividness, intactness, or unity of the current
48 viewshed or substantially degrade other visual resources observable from SR-74. Therefore, operation of

1 the proposed project would have a less than significant impact on visual resources observable from SR-
2 74.

3
4 **Impact AE-3: Substantially degrade the existing visual character or quality of the site and
5 its surroundings.**

6 *LESS THAN SIGNIFICANT AFTER MITIGATION*
7

8 **Construction**

9 During construction, the following activities would be visible to sensitive viewer groups: removal of
10 vegetation, construction of buildings, removal of distribution and transmission structures, grading and
11 excavation of footings, trenching to install underground conduit, and clearing and grading associated
12 with the establishment of new access roads and staging areas. The majority of these activities would
13 require the use of construction vehicles and various types of construction-related heavy equipment.
14 Visual impacts that have the potential to degrade the existing visual character within the ROI would
15 occur throughout the project ROW over a 64-month period. Appendix G of this EIR provides a detailed
16 schedule for individual construction activities, by location.
17

18 As discussed in Section 2.4.1, "Construction Schedule, Personnel, and Equipment," the exact sequencing
19 of proposed construction activities is unknown; however, it is anticipated that each phase of project
20 construction of the proposed double-circuit 230-kV transmission line would occur consecutively, limiting
21 the duration of visual impacts observable from a given vantage point to shorter periods. For instance,
22 grading activities at a given transmission structure may be visible for a period of one month, followed by
23 a period of no construction-related visual impacts before the next phase of construction occurred.
24 Therefore, visual impacts associated with construction of much of the proposed double-circuit 230-kV
25 transmission line are considered temporary.
26

27 The presence of construction equipment, views of construction activities, and increased visual contrast
28 due to storage of construction materials could substantially degrade the existing character and quality of
29 views throughout the ROI through the introduction of new sources of visual contrast. These new sources
30 of visual contract could, in turn, degrade the unity and intactness of views throughout the ROI, resulting
31 in potentially significant impacts.
32

33 Visual impacts associated with construction of the proposed project would be localized and short term.
34 These short-term impacts on scenic vistas and view corridors would be reduced with the implementation
35 of APM AES-1 and APM AES-2, which would require the applicant to keep all worksites clean and
36 restore disturbed areas to their pre-construction appearance as soon as possible. However, visual impacts
37 associated with construction would remain significant because equipment would still be visible. MM
38 AES-3 requires the applicant to visually screen staging areas and worksites and MM AES-2 requires the
39 applicant to minimize clearing and ground disturbance and restore disturbed areas to pre-project
40 conditions. Implementation of MM AES-3 and MM AES-2 would reduce visual impacts on scenic
41 vistas, gateways, and view corridors to a less than significant level. Reducing both the duration and
42 intensity of construction activities observable from scenic vistas, gateways, and view corridors would
43 mitigate potential visual impacts during the construction phase of the proposed project. Therefore,
44 impacts associated with construction of the proposed transmission line poles and 12-kV distribution line
45 on visual resources would be less than significant with mitigation under this criterion.
46

1 **San Juan Capistrano Substation**

2 Construction of the proposed San Juan Capistrano Substation would occur continuously over a 51-month
3 period (see Table 2-6). Since the impacts would occur over the course of several years, they would be
4 considered temporary and long term. Temporary and long-term impacts associated with the construction
5 of the proposed San Juan Capistrano Substation would be similar to those discussed in the operations
6 section.

7
8 **Talega Substation**

9 Construction activities at Talega Substation would occur within the fence of the existing facility and
10 would be minor and indistinguishable from routine maintenance of the substation. Therefore,
11 construction activities at Talega Substation would not contribute to the degradation of existing visual
12 resources, and therefore would have a less than significant impact on visual quality.

13
14 **Operations**

15 The proposed 230-kV transmission line poles would be steel, range in height from 80 to 160 feet, and
16 range in diameter from 4 to 6 feet (see Tables 2-4 and 2-5, Figures 2-5a and 2-5b). The proposed 12-kV
17 distribution line would mainly be located underground or on existing structures; however, the new
18 structures that would be constructed as part of the 12-kV distribution line would be steel, range in height
19 from 50 to 80 feet, and range in diameter from 3 to 4 feet. Visual simulations were ~~used~~ prepared to
20 determine if project facilities would degrade the existing visual character of the site and its surroundings.
21 A discussion of a representative simulation from each landscape unit is presented below.

22
23 **Camino Capistrano (KOP 1)**

24 KOP 1 (Figure 4.1-7) shows the existing Capistrano Substation as seen from Camino Capistrano, as well
25 as ~~an visual simulation~~ artistic rendering of the proposed San Juan Capistrano Substation during operation
26 with the incorporation of MM CUL-8: Preservation of Former Utility Structure at Capistrano Substation.

27
28 The current view of Capistrano Substation is a focal landscape dominated by the vertical transmission
29 structures and the large mass of the substation building. Atmospheric conditions diminish the amount of
30 contrast introduced by both these features. The geometric forms associated with transmission
31 infrastructure create many non-convergent angular lines, which appear primarily horizontal and
32 somewhat unorganized. These lines serve as visual barriers, which compartmentalize the view along both
33 the horizontal and vertical axes. The trees and transmission structures appear coarse, while the asphalt
34 and grass have a smooth texture. Dominant colors include beige, greys, and off white. The scale of the
35 substation, and complexity of the associated forms and lines, make it the dominant feature in the view.
36

References: Fig. 4.1-6, Existing View and Computer Rendering from Camino Capistrano, Proponent's Environmental Assessment, SDG&E and Environmental Vision (photo sim, April 18, 2012); and, Page 15, San Juan Capistrano Substation – Conceptual Rendering, Camino Capistrano, Richard Yen & Associates



Existing View from Camino Capistrano Looking East



Computer Rendering of Proposed Project

Figure 4.1-7
Existing View and Computer Rendering
from Camino Capistrano
South Orange County Reliability Enhancement Project

1 The rendering of the proposed project in the visual simulation shows a more unified landscape due to the
2 removal of the large transmission structure above eye level. Enclosing the substation components also
3 removes the majority of the non-convergent angular lines, which in turn makes distant views of landscape
4 features more prominent. Reduced atmospheric effects and the introduction of bold colors and
5 unobscured geometric features would increase the intactness and unity and add visual interest when
6 compared to the existing view. As shown in Figure 4.1-7, the proposed project with MM CUL-8
7 implemented preserves views of the historic substation building from Camino Capistrano by maintaining
8 the building's façade and general appearance in these public views. Several tall trees that substantially
9 screen views of the building would be removed and the grass-covered berms between the building and
10 street would be removed and the ground leveled. A row of low (3- to 4-foot-high) flowering shrubs
11 would be planted near the base of the building and the remaining area between the row of shrubs and the
12 sidewalk would be covered with either decomposed granite or pea gravel. Other low shrubs would be
13 planted in rows lining the entry drives and other walls. Decomposed granite or pea gravel would cover
14 most of the remaining areas. Several small trees would be placed as accent plants in the landscaped area.
15 In addition, most of the existing wood power poles and overhead conductors visible in the existing view
16 would be removed.

17
18 The proposed project with MM CUL-8 implemented would preserve the building's historical aesthetic
19 character and open up views of it from the public street, similar to how it was able to be viewed
20 historically. Although removal of the tall screening trees would reduce intactness of views from the
21 street, removal of most of the wood power poles and overhead conductors, in combination with the more
22 orderly and open landscape design, would substantially reduce the amount of clutter and improve the
23 overall vividness and unity in these public views. The addition of tall and massive screening structures
24 east of the historic substation building would somewhat reduce overall intactness, vividness, and unity of
25 views from the street. However, the tall screening wall along the north edge of the substation property
26 would screen views of existing tall and dense vegetation and increase contrast introduced by the
27 structures. Its light color and angular lines would also produce strong contrast and attract attention.

28
29 Preserving the historical substation building, opening up public views of it, and improving the
30 landscaping between the building and street improve the vividness, intactness, and unity of views from
31 the street. However, the tall, angular, light-colored north wall, and massive screening structures east of
32 the historical substation building produce strong contrast and substantially detract from the overall
33 appearance and character of views from the street. Although components of the proposed project with
34 MM CUL-8 implemented are a substantial improvement over the existing condition, some components of
35 the proposed project degrade the existing visual character or quality of the site and its surroundings.
36 Views from Camino Capistrano have high visual sensitivity because these immediate foreground views
37 are by neighborhood and community residents and tourists visiting the community and this street receives
38 a high volume of use. In addition, during public scoping and in subsequent comments, area residents and
39 others expressed a high level of concern for the appearance of the substation building, other structures,
40 and associated landscaping. For these reasons, the impact under this criterion would be significant.
41 Implementation of MM AE-1 would ensure that all proposed project facilities visible from Camino
42 Capistrano are aesthetically consistent with and do not degrade the existing visual character or quality of
43 the site and its surroundings. With implementation of MM AE-1, the proposed project would result in a
44 less than significant impact under this criterion.

1 Potentially affected user groups include motorists and pedestrians who would experience short duration
2 views, and local residents⁴ who would experience longer duration views. The proposed project would
3 result in a more unified view from Camino Capistrano than the existing Capistrano Substation.
4

5 ~~During public scoping, several comments were received about the appearance of the substation building,
6 the frontage wall, and associated landscaping. As discussed Section 4.1, the applicant hosted a two hour
7 meeting with the local community and City of San Juan Capistrano officials on April 18, 2012. The
8 applicant met with members of the City of San Juan Capistrano Architectural Design Review Committee
9 in 2013 and worked with an architect to incorporate the Spanish mission style design to address the
10 public's concerns and the City's goals and policies (see Figure 4.1-7). Because impacts on visual quality
11 can be subjective, the design of the proposed San Juan Capistrano Substation could result in a significant
12 impact on some viewers. Implementation of MM AES 1 would ensure that the new building and wall are
13 consistent with the design standards of the City of San Juan Capistrano and that proposed project
14 facilities visible from Camino Capistrano are aesthetically consistent with their surroundings.
15 Implementation of MM AES 4 would further reduce potential impacts by reducing light reflection and
16 color contrast to help blend the structures into the landscape setting. Implementation of MM AES 1 and
17 MM AES 4 would reduce impacts from the proposed San Juan Capistrano Substation to less than
18 significant.~~

19 **Via Priorato (KOP 2)**

20
21 KOP 2 (Figure 4.1-8) represents the view from residences along Via Priorato, near Paseo Boveda, located
22 just south of the proposed double-circuit 230-kV transmission line route in the foreground distance zone.
23 This location represents other residential communities located adjacent to the proposed double-circuit
24 230-kV transmission line route with views at or slightly above eye level.
25

26 The existing view from Via Priorato is currently dominated by the two lattice transmission structures in
27 the foreground, which are silhouetted against the blue sky (or “skylined”), making them dominant
28 features. The vertical structures and their associated horizontal transmission lines enclose the view,
29 resulting in the appearance of a canopied landscape. Via Priorato itself has a flat, smooth surface and
30 grey hues and is framed by the complex geometric features of the adjacent houses, fences, and
31 ornamental landscaping. Vegetation, both natural and ornamental, covers the hill and softens the
32 appearance of other features on the periphery of the view.
33

34 The proposed project would modify the size and type of transmission structures within the viewshed, but
35 would not change the number or location. At this distance, both the new and existing transmission
36 structures would be highly visible regardless of atmospheric conditions. Because they are silhouetted
37 against the sky (or “skylined”), and appear as regularly spaced linear and vertical elements, contrast
38 would be strong in form and line. However, when compared to the contrast produced by the existing
39 transmission structures that would be replaced by the proposed project, the incremental difference in the
40 amount of visual contrast would be negligible. Operation of the proposed project would have a less than
41 significant impact on the visual quality (vividness, intactness, and unity) of the landscape.
42

⁴ Potentially affected residents would likely be viewing the project from adjacent collector streets. Impacts on views from collector streets are not analyzed under this criterion.



Existing View from Via Priorato Near Paseo Boveda Looking North



Visual Simulation of Proposed Project

Figure 4.1-8
Existing View and Visual Simulation from Via Priorato
South Orange County Reliability Enhancement Project

1 **San Juan Creek Road (KOP 3)**

2 KOP 3 (Figure 4.1-9) represents the view from San Juan Creek Road looking southwest toward Juliana
3 Farms Road. This view is located just north of the proposed double-circuit 230-kV transmission line
4 route, with transmission structures visible in both foreground and middleground distance zones. This
5 KOP is representative of residential communities located adjacent to the proposed double-circuit 230-kV
6 transmission line route, as well as views from arterial roadways. However, residents and motorists have
7 different levels of visual sensitivity. Residents experience long duration views and have a high level of
8 visual sensitivity, while motorists experience short duration views and have low visual sensitivity.
9 Aspects of the proposed double-circuit 230-kV transmission line that would be visible from this KOP,
10 and other similar viewsheds, include transmission structures and lines, along with short-term views of
11 maintenance activities.

12
13 The existing view from KOP 3 is dominated by a series of three transmission structures, each of a
14 different size and type of structure. Like other views of the proposed project, the transmission structures
15 are skylined with views of the structures above eye level, increasing their prominence. The vertical
16 structures also appear smooth when compared to the coarse green foliage of the tree canopy below them.
17 The road, tree canopy, and skyline break the view into three distinct features. The dominance of the
18 transmission structures and lines diminishes the prominence of the three existing lattice transmission
19 structures in the foreground, which are silhouetted against the sky.

20
21 The proposed project would increase the size and modify the type and number of transmission structures
22 within the viewshed. At this distance, both the new and existing transmission structures would be highly
23 noticeable regardless of atmospheric conditions. Because they are skylined, and appear as regularly
24 spaced linear and vertical elements, the contrast introduced by the new transmission structures would be
25 strong in form and line. The taller monopoles that would be constructed as part of the proposed project
26 would have associated transmission lines on the same horizontal plane as the remaining existing
27 transmission line, making the lines themselves a more dominant and noticeable feature. The new
28 transmission structures would be co-dominant features with the existing transmission structures and the
29 incremental difference in the amount of visual contrast would be negligible. Operation of the proposed
30 project would have a less than significant impact on the visual quality (vividness, intactness, and unity)
31 of the landscape. Implementation of MM AES-4 would further reduce potential impacts by reducing light
32 reflection and color contrast to help blend the structures into the landscape setting.

33
34 **San Juan Hills High School (KOP 4)**

35 KOP 4 (Figure 4.1-10) represents the view from San Juan Hills High School, located just north of the
36 proposed double-circuit 230-kV transmission line route in the foreground distance zone. Like views from
37 residential communities, viewers at the school would experience the view for prolonged durations,
38 making transmission infrastructure more prominent.

39
40 The current view from San Juan Hills High School is an open landscape view dominated by the two
41 existing dead-end transmission structures in the foreground. The vertical lines form by the transmission
42 structures are repeated at a smaller scale by the light fixtures. The ordered geometric lines formed by the
43 parking lot, sidewalk, and landscape retaining wall tend to focus the viewer's attention on elements in the
44 foreground of the view.

45
46 The rolling hills in the middle-ground appear smooth, with subtle changes in the color and texture of the
47 vegetation adding visual interest. Colors include the dull browns, yellows, and greens (low chroma) of
48 the hills against the concrete and asphalt greys and vivid greens of the ornamental landscaping.



Existing View from San Juan Creek Road at Juliana Farms Road Looking Southeast



Visual Simulation of Proposed Project

Figure 4.1-9
Existing View and Visual Simulation from San Juan Creek Road
South Orange County Reliability Enhancement Project



Existing View from San Juan Hills High School Looking South



Visual Simulation of Proposed Project

Figure 4.1-10
Existing View and Visual Simulation from San Juan Hills High School
South Orange County Reliability Enhancement Project

1 The proposed project would modify the size and number of dead-end transmission structures. At this
2 distance, both the new and existing dead-end transmission structures would be highly noticeable,
3 regardless of atmospheric conditions. The addition of two taller structures would increase the amount of
4 contrast, and effectively create a visual barrier, splitting the view into two. New large structures would
5 also have larger crossarms than the existing structures, which adds additional mass and visual weight to
6 these features. The additions and modifications associated with the proposed project would create a
7 moderate increase in the degree of contrast created by the existing transmission structures to be replaced,
8 thus resulting in a less than significant impact.

9
10 Operation of the proposed project would result in a moderate increase in contrast over the existing
11 condition; however, this moderate increase would not significantly degrade the visual character of the
12 site and its surroundings. Undergrounding the proposed double-circuit 230-kV transmission line route
13 adjacent to San Juan High School would have a beneficial impact on the visual quality of the
14 surroundings by eliminating a source of visual clutter, resulting in a more unified and intact landscape
15 when compared to baseline conditions.

16 17 ***Via Ceramica (KOP 5)***

18 KOP 5 (Figure 4.1-11) represents the view from Via Ceramica, located just northwest of the proposed
19 double-circuit 230-kV transmission line route in the foreground and middleground distance zones. Local
20 residents experience prolonged middleground views and have high visual sensitivity, which would
21 increase the impact of new sources of visual contrast—in this instance, new transmission structures.
22 Aspects of project construction that would be visible from this KOP, and other similar views, include the
23 removal and installation of transmission structures, as well as the clearing and grading required to
24 establish or improve access roads and transmission pads.

25
26 Construction of the proposed project would modify the size of one of the seven transmission lines. The
27 low H-frame structures would be replaced with larger TSPs, introducing a larger vertical elements in the
28 foreground and middleground views. As shown in the simulation for this view (Figure 4.1-11), while
29 the larger structures are most noticeable in the immediate foreground, while these features tend to blend
30 in with the other nearby transmission structures that they parallel and are less noticeable in more distant
31 foreground and middleground views. Although the monopole structures differ from the lattice towers in
32 form and texture, the overall increase in contrast produced by the new structures is incremental and
33 therefore not substantial due to their similar heights, colors, vertical lines, and horizontal cross bars with
34 insulators. In addition, the presence of other vertical structures in the view with similar vertical lines and
35 form tend to further reduce the overall contrast produced by the new monopole structures. When
36 compared to the amount of contrast introduced by the existing transmission structures that would be
37 replaced by the proposed project, the difference in the amount of visual contrast is less than significant.
38 Implementation of MM AES-4 would further reduce potential impacts by reducing light reflection and
39 color contrast to help blend the structures into the landscape setting.

40 41 ***Talega Park (KOP 6)***

42 KOP 6 (Figure 4.1-12) represents the view from Talega Park, located 0.25 miles north of the
43 Transmission Line Segment 4. Recreational users of the park with high visual sensitivity would
44 experience shorter duration views when compared to local residents; however, recreational viewers in
45 parks are still considered to have high viewer sensitivity regardless of duration of views.



Existing View from Via Ceramica North of Calle Saluda Looking Northwest



Visual Simulation of Proposed Project

Figure 4.1-11
Existing View and Visual Simulation from Via Ceramica
South Orange County Reliability Enhancement Project



Existing View from Talega Park Looking South



Visual Simulation of Proposed Project

Figure 4.1-12
Existing View and Visual Simulation from Talega Park
South Orange County Reliability Enhancement Project

1 The existing view from Via Ceramica is dominated by the complex geometric forms of the housing
2 community, park, and associated residential landscaping in the foreground. As shown in the simulation
3 for this view (Figure 4.1-12), the existing transmission structures are skylined on the ridge in the
4 middleground, increasing their prominence. Distant views are partially obscured by the vegetation in the
5 foreground. The proposed project would modify the size, number, and locations of several transmission
6 structures. Most noticeably, additional TSPs would now dominate the western portion of middleground
7 views, and their associated above-ground transmission lines create a horizontal barrier, which would
8 further confine the view. Although the new structures are more noticeable silhouetted against the sky,
9 the presence of other existing transmission structures of similar height skylined above the low ridge
10 reduce their overall contrast in the view. The monopole structures differ from the lattice towers in form
11 and texture; however, the overall increase in contrast produced by the new structures is incremental and
12 therefore not substantial due to their similar heights, colors, vertical lines, and horizontal cross bars with
13 insulators. When compared to the amount of contrast introduced by the existing transmission structures
14 that would be replaced by the proposed project, the incremental difference in the amount of visual
15 contrast would be less than significant.

16
17 The placement of project infrastructure adjacent to the Talega Substation, on property owned and
18 operated by the United States Navy, would need to be consistent with the Marine Corps' *Base Exterior*
19 *Architecture Plan for Marine Corps Base Camp Pendleton* (BEAP; 2010). As stated in the regulatory
20 overview (Section 4.1.2.1), the BEAP outlines several goals and objectives that pertain to the placement
21 of utility infrastructure in the Talega area. Specifically, the BEAP calls for the undergrounding of
22 electrical utilities wherever possible, and visual screening of existing substations and transformers with
23 solid walls and planting. Because the proposed project would occur within existing ROWs, it would not
24 create a new conflict with the BEAP.

25
26 In summary, the proposed project would have a less than significant impact on KOP 2 through KOP 6.
27 The proposed San Juan Capistrano substation could have a significant impact on KOP 1; however, the
28 implementation of APM AES-3 and MM AES-1 would reduce this impact to less than significant.
29 Therefore, the operation of the proposed project would have a less than significant impact with
30 mitigation under this criterion.

31
32 **Impact AE-4: Create a new source of substantial light or glare which would adversely**
33 **affect day or nighttime views in the area.**
34 *LESS THAN SIGNIFICANT WITH MITIGATION*

35 36 **Construction**

37 Construction of the proposed project may require that work be performed during nighttime or other non-
38 standard work hours, as discussed in Section 2.4.3.1, "Nighttime and Other Non-standard Work." Any
39 construction activity occurring after sunset would introduce new sources of light that would be visible
40 from adjacent roadways, trails, and surrounding residential communities. Temporary construction
41 lighting—specifically, lighting adjacent to residences and in rural areas—has the potential to
42 significantly affect nighttime views in the ROI by introducing a new source (or sources) of visual
43 contrast and degrading unity of nighttime views. Implementation of MM AES-5, which would require the
44 applicant to shield or downcast construction lighting, would reduce potentially significant impacts on
45 visual resources to less than significant levels by limiting the intensity of nighttime construction lighting.

46 47 **Operations**

48 Operation of the proposed project would modify two existing sources of light at Talega Substation and
49 the proposed San Juan Capistrano Substation. Both of these substations are currently lit at night when

1 needed to ensure safe operating conditions for the applicant’s employees. As described in Section
2 2.3.1.5, “Lighting and Landscaping,” LED lighting would be used at entry gates and for other substation
3 lighting needs. The types of control shelter and dead-end structure lighting installed may vary. All lights
4 would be shielded and aimed downward.
5

6 The City of San Juan Capistrano’s Community Design Element (1999) discourages nighttime lighting in
7 order to maintain the small village and rural character of the city. Existing lighting is consistent with the
8 City of San Juan Capistrano and San Clemente’s ordinances that require hooded fixtures to direct light
9 downward. As part of the project description, the applicant has stated that substation lighting would not
10 be left on at night during normal operations and would only be used to allow for nighttime emergency
11 repair and maintenance access. Neither the existing nor proposed transmission line facilities include any
12 permanent lighting. Potential glare from overhead conductors would be similar to what currently exists.
13 Therefore, there would be a less than significant impact under this criteria during operation.
14

15 **4.1.34 Mitigation Measures**

16

17 **MM AES-1: Architectural Review of San Juan Capistrano Substation.** To ensure that the aesthetic
18 design of San Juan Capistrano Substation facilities such as walls, buildings, and landscaping are
19 consistent with the City of San Juan Capistrano’s aesthetic design criteria, the applicant shall submit a
20 revised series of elevations and a landscape plan to the City’s Architectural Review Board (ARB) prior to
21 filing for grading and building permits. The ARB shall determine if the applicant’s revised plans are
22 consistent with the City’s aesthetic design criteria and if any modifications are needed. The applicant
23 shall not initiate ground disturbing activities until the ARB approves the aesthetic design and landscaping
24 plan for the proposed San Juan Capistrano Substation.

25 **MM AES-2: Minimize Clearing and Ground Disturbance and Restore Disturbed Areas to Pre-**
26 **Project Conditions.** Clearing and ground disturbance required for construction, operation, and
27 maintenance, including but not limited to, access roads, pulling sites, construction and maintenance pads,
28 and construction laydown areas, will be the minimum required, and the applicant will consult with the
29 CPUC to identify and implement methods to restore disturbed areas to pre-construction conditions to the
30 extent feasible for all areas not required for operation and maintenance. ~~For areas required for operation~~
31 ~~and maintenance,~~ The applicant will consult with the lead agency CPUC to identify and implement
32 methods to restore disturbed areas to conditions that would blend with the overall landscape character to
33 the extent feasible. Areas around new or rebuilt transmission structures that must be cleared during the
34 construction process or other areas of ground disturbance will be regraded and revegetated to restore
35 these areas to an appearance that will help blend them into the overall landscape character.
36

37 **MM AES-3: Screen or Effectively Locate Laydown Areas.** Laydown areas within view of residences,
38 scenic roads, and recreational facilities will be effectively located to limit views (aesthetic effects) of
39 materials, equipment, vehicles, and other items used during construction. Staging and laydown areas that
40 cannot be located away from public views will be screened using opaque fencing or landscaping to limit
41 aesthetic effects. Where laydown areas are visible from publicly accessible areas and roads, any
42 associated signage will be kept to the minimum necessary to communicate information about the project,
43 safety, and security. All laydown areas will be effectively reclaimed immediately following completion
44 of their use.
45

46 **MM AES-4: Glare and Color Contrast Reduction for Transmission Structures and Conductors.** To
47 reduce potential glare and color contrast for components of the proposed project, the finish on all new
48 transmission structures will be non-reflective (e.g., steel that has been galvanized and treated to create a
49 dulled finish), to reduce light reflection and color contrast and help blend the structures into the

1 landscape setting. All new transmission conductors will be non-specular to minimize conductor
2 reflectivity and help blend them into the landscape setting.

3
4 **MM AES-5: Shield or Downcast Construction Lighting.** To reduce the potential for visual impacts
5 associated with construction lighting, lighting for construction activities will be limited to an amount
6 required for safety of construction personnel and security of construction equipment. In order to
7 minimize the effect of light pollution in the surrounding area, all construction lighting will be operated
8 and oriented to mostly or fully eliminate offsite light spill at all times.

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