

## D.3 Visual Resources

The visual resources of a given area consist of the landforms, vegetation, water features, and cultural modifications (physical changes caused by human activities) that impart an overall visual impression of the area landscape. There are a number of factors that are considered in the evaluation of a landscape's existing visual resources in order to assess the potential for one or more visual impacts to occur including: visual quality, viewer concern or sensitivity, and viewer exposure. Each of these factors is generally expressed as low, moderate, or high as discussed below.

**Visual Quality** is a measure of the overall impression or appeal of an area as determined by the particular landscape characteristics such as landforms, rockforms, water features, and vegetation patterns, as well as associated public values. The attributes of variety, vividness, coherence, uniqueness, harmony, and pattern contribute to visual quality classifications of indistinctive (low), common (moderate), and distinctive (high). Visual quality is studied as a point of reference to assess whether a given project would appear compatible with the established features of the setting or would contrast noticeably and unfavorably with them.

**Viewer Concern** addresses the level of interest or concern of viewers regarding an area's visual resources and is closely associated with viewers' expectations for the area. Viewer concern reflects the importance placed on a given landscape based on the human perceptions of the intrinsic beauty of the existing landforms, rockforms, water features, vegetation patterns, and even cultural features.

**Viewer Exposure** describes the degree to which viewers are exposed to views of the landscape. Viewer exposure considers landscape visibility (the ability to see the landscape), distance zones (proximity of viewers to the subject landscape), number of viewers, and the duration of view. Landscape visibility can be a function of several interconnected considerations including proximity to viewing point, degree of discernible detail, seasonal variations (snow, fog, and haze can obscure landscapes), time of day, and presence or absence of screening features such as landforms, vegetation, and/or built structures. Even though a landscape may have highly scenic qualities, it may be remote, receiving relatively few visitors and, thus, have a low degree of viewer exposure. Conversely, a subject landscape or project may be situated in relatively close proximity to a major road or highway utilized by a substantial number of motorists and yet still result in relatively low viewer exposure if the rate of travel speed on the roadway is high and viewing times are brief, or if the landscape is partially screened by vegetation or other features. Frequently, it is the subject area's proximity to viewers or *distance zone* that is of particular importance in determining viewer exposure. Landscapes are generally subdivided into three or four distance zones based on relative visibility from travel routes or observation points. Distance zones typically include foreground, middleground, and background. The actual number of zones and distance assigned to each zone is dependent on the existing terrain characteristics and public policy and is often determined on a project by project basis.

**Overall Visual Sensitivity** is a concluding assessment as to an existing landscape's susceptibility to an adverse visual outcome. A landscape with a high degree of visual sensitivity is able to accommodate a lower degree of adverse visual change without resulting in a significant visual impact. A landscape with a low degree of visual sensitivity is able to accommodate a higher degree of adverse visual change without resulting in a significant visual impact. Overall visual sensitivity is derived from a comparison of existing visual quality, viewer concern, and viewer exposure.

There are also a number of factors that are considered in the evaluation of visual change that would be caused by a project including: visual contrast, project dominance, and view blockage. Each of these factors is also generally expressed as low, moderate, or high as discussed below

*Visual Contrast* describes the degree to which a project's visual characteristics or elements (consisting of form, line, color, and texture) differ from the same visual elements established in the existing landscape. The degree of contrast can range from low to high. The presence of forms, lines, colors, and textures in the landscape similar to those of a Proposed Project indicates a landscape more capable of accepting those project characteristics than a landscape where those elements are absent. This ability to accept alteration is often referred to as visual absorption capability and typically is inversely proportional to visual contrast.

*Project Dominance* is a measure of a feature's apparent size relative to other visible landscape features and the total field of view. A feature's dominance is affected by its relative location in the field of view and the distance between the viewer and the feature. The level of dominance can range from subordinate to dominant.

*View Blockage or Impairment* describes the extent to which any previously visible landscape features are blocked from view as a result of the project's scale and/or position. Blockage of higher quality landscape features by lower quality project features causes adverse visual impacts. The degree of view blockage can range from none to high.

*Overall Visual Change* is a concluding assessment as to the degree of change that will be caused by a project. Overall visual change is derived from a comparison of resulting visual contrast, project dominance, and view blockage.

*Key Viewpoints* (KVPs) are locations from which the visual analysis is focused. KVPs are generally selected to be representative of the most critical locations from which the project will be seen. KVPs are often located in an effort to evaluate existing landscapes and potential impacts on visual resources with various levels of sensitivity, in different landscape types and terrain, and from various vantage points. Typical KVP locations for the present project include (1) along major or significant travel corridors or points of visual access; (2) at key vista points; (3) at significant recreation areas; (4) in residential areas; and (5) at locations that provide good examples of the existing visual context. Figure D.3-1 shows the location of each of the Key Viewpoints selected for detailed analysis. A summary of the visual analysis conducted for this project is presented as a series of foldout tables at the end of the visual resources section in Appendix VR-1. Also, at each key viewpoint, the existing landscape was photographed and a visual simulation was prepared.

### **D.3.1 Environmental Setting for the Proposed Project**

The Proposed Project is located on the San Francisco Peninsula in San Mateo and San Francisco Counties. This area is within the Coast Range foothills landscape zone. The overhead portion of the project passes through a rift or valley formed by the San Andreas Fault. To the west, the Cahill, Sawyer and Sweeney Ridges rise to elevations of 1,100 to 1,300 feet above sea level. To the east are the Buri Buri and Pulgas Ridges. Enclosed within these ridges, the rift zone consists of undulating terrain situated approximately 350 to 600 feet above sea level. The Upper and Lower Crystal Springs Reservoirs and San Andreas Lake are three reservoirs situated within the rift zone (PG&E, 2002). Within San Mateo County, the Proposed Project parallels the Interstate 280 (I-280) corridor. This portion of the route passes through varied landscapes comprised of steep and rolling hillsides and ridgelines, gently sloping to level valley bottoms, and residential communities. This portion of San Mateo County is known for its scenic qualities and aesthetic attributes and I-280 is a State-designated Scenic Highway. The highway generally conforms to the corridor's natural topography as it gently winds through rolling grasslands, woodlands and forested ridgeline slopes. Views from the highway and surrounding viewing areas encompass

Figure D.3-1. Location of Key Viewpoints

*For security reasons this figure is not included in the online version of the report.*



angular to rolling ridgelines, forested slopes, waterbodies, grass-covered rolling hills, landmarks, roadway infrastructure, urban development, and electric transmission infrastructure. Much of the area to the west of I-280 consists of undeveloped watershed lands administered by the City of San Francisco. Along the overhead portion of the proposed route, views of the project would be available from I-280, State highways, and local roads; parks, open space, trails, and recreation facilities; monuments, scenic overlooks, and vista points; and residential and commercial development. County-designated Scenic Routes along this portion of the route include Edgewood Road, Cañada Road, State Route 92, Crystal Springs Road, and Skyline Boulevard (from Crystal Springs Road north to Canyon Road). Skyline Boulevard and Trousdale Drive are locally designated Scenic Connectors. In contrast, the underground portion of the route would pass beneath existing city streets within suburban and urban landscapes consisting primarily of residential, commercial, and industrial uses. Views of this portion of the project would be limited to adjacent roadways and uses during project construction. Along this portion of the route, San Bruno Avenue is a County-designated Scenic Route and El Camino Real is a locally designated Scenic Connector.

### D.3.1.1 Jefferson Substation to Ralston Substation

This portion of the Proposed Project would include Towers 0/1 through 4/27. From Jefferson Substation, the route would pass through the open grass-covered hillsides of Edgewood County Park and the Pulgas Ridge Open Space (Towers 0/1 through 1/8) before spanning to the west side of I-280. From Towers 1/9 through 4/24, the proposed route would pass through undeveloped watershed lands consisting primarily of grassland and oak woodland habitat. The proposed route would then span back to the east side of I-280 and Tower 4/25 before crossing to the north side of SR 92 and Tower 4/26, continuing on to Tower 4/27. The landscape in the vicinity of Towers 4/24 to 4/27 is dominated by the I-280/SR-92 interchange infrastructure. From the highway, the route ascends a rolling, grass-covered hillside to Towers 4/26 and 4/27 which are adjacent to the Hillcrest Juvenile Home.

There are numerous opportunities to view this segment of the Proposed Project between the Jefferson and Ralston Substations. Specific areas of concern include Edgewood County Park, Pulgas Ridge Open Space, northbound and southbound I-280 and Cañada Road, northbound and southbound I-280 vista points, Crystal Springs Trail, and the Filoli Center. Based on a preliminary field reconnaissance, it was determined that the Filoli Center would have very limited viewing opportunity and primarily from an outer portion of the parking lot and from the exit driveway. It was also determined that views of the project from Pulgas Ridge Open Space would be similar to those experienced at Edgewood County Park and that views of the Proposed Project from the northbound I-280 vista point would be somewhat limited. Therefore, seven key viewpoints (KVPs) were selected to represent the visual impacts that would occur along this route segment. A detailed visual analysis of the existing setting was conducted at each representative KVP, which included: Edgewood County Park (KVP 1), I-280 Southbound (KVP 2), I-280 Northbound (KVP 3), Cañada Road Southbound and Crystal Springs Trail (KVP 4), I-280 Southbound Vista Point (KVP 5), Cañada Road Northbound (KVP 6), and I-280 Southbound at SR-92 (KVP 7).

The location of each of these KVPs is shown on Figure D.3-1. The results of the visual analysis are summarized in Appendix VR-1. A discussion of the visual setting for each KVP is presented in the following paragraphs.

#### Key Viewpoint 1 – Edgewood County Park

Key Viewpoint 1 was established on the south loop of the Serpentine Trail in Edgewood County Park (see Figure D.3-2A; Figures are presented in Section D.3.3.3). Viewing to the south toward the pro-

posed route, this location was selected to generally characterize the existing landscape along the southern portion of the proposed route that passes through Edgewood County Park. Views from the park's trails encompass a predominantly natural setting with limited development other than the I-280 corridor and the existing electric transmission line.

**Visual Quality:** moderate-to-high. Much of the landscape visible from the trail consists of foreground, open undeveloped rolling grass-covered hills punctuated by stands of eucalyptus and oak woodland, backdropped by middleground to background forested ridges. However, the existing electric transmission line is a prominent feature in foreground views from the park's trails and diminishes the scenic integrity of the park's landscape, reducing what would otherwise be a high level of visual quality.

**Viewer Concern:** high. Visitors enjoy the predominantly natural setting with distant, panoramic sightlines to the forested ridges west of I-280 and the rolling grasslands east of I-280. The predominantly undeveloped character of the park contrasts with the intensely urban landscapes further to the east. Although visitors also anticipate the substantial presence of the I-280 corridor and existing electric transmission infrastructure, any increase in industrial character visible from the park's trails or blockage of trail views would be seen as an adverse visible change.

**Viewer Exposure:** moderate-to-high. The proposed route would be highly visible in the foreground of views from KVP 1 as it passes through the park. Although the duration of view would be extended, the number of potential viewers would be relatively low.

**Overall Visual Sensitivity:** moderate-to-high. For visitors to Edgewood County Park in general and KVP 1 specifically, the moderate-to-high visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 2 – Interstate 280 Southbound**

Key Viewpoint 2 was established on southbound I-280 (a State-designated Scenic Highway), just past the Edgewood Road off-ramp (see Figure D.3-3A). The view is to the south toward Towers 0/3, 0/4, and 0/5. This viewpoint is approximately 0.35 to 0.8 miles west of the proposed route and was selected to characterize the existing landscape visible to southbound travelers on I-280. Views from southbound I-280 encompass a predominantly natural setting with limited development other than the I-280 corridor and the existing electric transmission line.

**Visual Quality:** moderate-to-high. Much of the landscape visible from I-280 consists of foreground, open undeveloped rolling grass-covered hills punctuated by stands of eucalyptus and oak woodland, backdropped by middleground to background forested ridges. However, the I-280 corridor and the existing electric transmission line (with its substantial industrial character) are prominent built features in views from I-280 and diminish the scenic integrity of the existing landscape, reducing what would otherwise be a high level of visual quality.

**Viewer Concern:** high. Travelers enjoy the predominantly natural setting with distant, panoramic sightlines to the forested ridges west of I-280 and the rolling grasslands adjacent to I-280. The predominantly undeveloped character of the surrounding landscape contrasts with the intensely urban landscapes further to the east. Although travelers anticipate the substantial presence of the I-280 corridor and existing electric transmission infrastructure, any increase in industrial character visible from I-280 or blockage of views from I-280 would be seen as an adverse visible change.

**Viewer Exposure:** high. The proposed route would be highly visible in the foreground to middleground of views from KVP 2 as the proposed route converges on I-280. The number of viewers would also be high and the duration of view would be extended because the route would be located within the primary cone of vision of travelers on I-280 for some distance as the proposed route parallels the freeway in close proximity.

**Overall Visual Sensitivity:** high. For southbound travelers on I-280 in general and at KVP 2 specifically, the moderate-to-high visual quality, high viewer concern, and high viewer exposure lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 3 – Interstate 280 Northbound**

Key Viewpoint 3 was established on northbound I-280, at the Edgewood Road off-ramp (see Figure D.3-4A). The view is to the north toward Towers 1/7, 1/8, and 1/9 as the route passes through the Pulgas Ridge Open Space (to the east of I-280) and then spans I-280 between Towers 1/8 and 1/9. This viewpoint is approximately 0.35 to 0.7 miles south of the proposed route and was selected to characterize the existing landscape visible to northbound travelers on I-280 in the vicinity of the southern portion of the Proposed Project. Views from northbound I-280 encompass a predominantly natural setting with limited development other than the I-280 corridor and the existing electric transmission line.

**Visual Quality:** moderate. Much of the landscape visible from I-280 consists of foreground, open undeveloped rolling grass-covered hills with scattered clusters of trees, all framing the centrally prominent curvilinear form of I-280. Further to the west (outside of the frame of view presented in Figure D.3-4A), are the forested Cahill, Sawyer, and Fifield Ridges. However, the I-280 corridor and the existing electric transmission line (with its substantial industrial character) are prominent built features in views from I-280 and diminish the scenic integrity of the existing landscape, reducing what would otherwise be a moderate-to-high level of visual quality.

**Viewer Concern:** high. Travelers enjoy the predominantly natural setting with distant, panoramic sightlines to the forested ridges west of I-280 and the rolling grasslands adjacent to I-280. Although travelers anticipate the substantial presence of the I-280 corridor and existing electric transmission infrastructure, any increase in industrial character visible from I-280, built structural prominence, or blockage of views from I-280 would be seen as an adverse visible change.

**Viewer Exposure:** high. The proposed route would be highly visible in the foreground to middleground of views from KVP 3 as the proposed route converges on and then spans I-280. The number of viewers would also be high and the duration of view would be extended because the route would be located within the primary cone of vision of travelers on I-280 for some distance approaching the span.

**Overall Visual Sensitivity:** moderate-to-high. For northbound travelers on I-280 in general and at KVP 3 specifically, the moderate visual quality, high viewer concern, and high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 4 – Cañada Road near Filoli Center**

Key Viewpoint 4 was established on southbound Cañada Road, just north of the entrance to the Filoli Center (see Figure D.3-5A). The view is to the southeast toward Towers 1/9 through 2/13 (closest) as the route spans I-280 and then converges on Cañada Road through undeveloped watershed lands. This viewpoint is approximately 0.13 to 0.73 miles west of the proposed route and was selected to characterize the existing landscape visible to southbound travelers on Cañada Road in the vicinity of Filoli Center. Views encompass a predominantly natural setting with limited development other than

Cañada Road and the existing electric transmission line. It should be noted that views of the proposed route from Filoli Center are extremely limited. Public views toward the route from the Center's structures and gardens are screened by buildings and vegetation. Limited views of the route are possible (though substantially screened) from the eastern-most areas of the parking lot and along the driveway while exiting the Center.

**Visual Quality:** moderate-to-high. Much of the landscape visible from Cañada Road appears natural in character, consisting of undeveloped oak woodland and grass-covered hills. While much of the view along this portion of Cañada Road is confined by roadside vegetation, some distant sightlines are available through breaks in the vegetation. Cañada Road and the existing electric transmission line (with its substantial industrial character) are evident built features and diminish scenic integrity of the existing landscape and reduce visual quality.

**Viewer Concern:** high. Travelers enjoy the predominantly natural setting of grassy hills and oak woodland. Although travelers anticipate the presence of existing electric transmission line, any increase in industrial character, built structural prominence, or blockage of views from Cañada Road would be seen as an adverse visible change.

**Viewer Exposure:** moderate The proposed route would have moderate-to-high visibility depending on the extent of vegetative screening along Cañada Road. Also, only Tower 2/13 would be briefly within the primary cone of vision of travelers on Cañada Road. The proposed route would be within the foreground to middleground of views from KVP 4 as the proposed route converges on and then diverges from Cañada Road. The number of viewers would be moderate and the duration of view would be brief-to-moderate owing to the adjacent vegetative screening.

**Overall Visual Sensitivity:** moderate-to-high. For travelers on Cañada Road in general and at KVP 4 specifically, the moderate-to-high visual quality, high viewer concern, and moderate viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 5 – Interstate 280 Southbound Vista Point**

Key Viewpoint 5 was established at the southbound I-280 vista point north of Edgewood (see Figure D.3-6A). The view is to the west-northwest toward Towers 3/19 through 4/24 (left to right) as the proposed route parallels Cañada Road through undeveloped watershed lands, then spans I-280. This viewpoint is approximately 0.44 to 1.3 miles east-southeast of the proposed route and was selected to characterize the existing landscape visible from the vista point. Views from the vista point encompass a predominantly natural setting with limited visible development other than the existing transmission line and a portion of the I-280 corridor.

**Visual Quality:** moderate-to-high: Much of the landscape visible from the vista point consists of foreground to background, open undeveloped rolling to angular grass-covered and forested hills and ridges, contrasted against the sliver of light blue indicating the Crystal Springs Reservoir. The landscape exhibits a high degree of intactness and coherence of form and character with substantial visual variety. However, this harmony of form and character is punctuated by the silver, vertical, industrial forms of the existing transmission line. It is these built features that diminish the scenic integrity of the existing landscape and reduce what would otherwise be a high level of visual quality.

**Viewer Concern:** high. Visitors to the vista point enjoy a predominantly natural setting with distant, panoramic sightlines to the hills, ridges, and reservoirs west of I-280. Visitor expectations are typically high at designated vista points and scenic overlooks. It is reasonable to assume that many visitors to this location are first-time viewers that would not necessarily expect to see industrial features in the form of existing electric transmission lines. Therefore, any visible industrial character or blockage of views from the vista point would be seen as an adverse visual characteristic.



**Viewer Exposure:** moderate-to-high. The proposed towers would be highly visible in the foreground to middleground of views from KVP 5 as the proposed route passes through the undeveloped watershed. The number of viewers would be low though the duration of view would be extended because of the static nature of viewing circumstance.

**Overall Visual Sensitivity:** moderate-to-high. For visitors to the vista point, the moderate-to-high visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 6 – Cañada Road**

Key Viewpoint 6 was established on Cañada Road approximately 0.33 miles south of Tower 3/22 (see Figure D.3-7A). The view is to the north toward Tower 3/22 as the proposed route converges on and then parallels Cañada Road. This viewpoint was selected to characterize the existing landscape visible from Cañada Road and the adjacent bike path and Crystal Springs Trail. Views from KVP 6 are confined by the adjacent terrain and vegetation.

**Visual Quality:** moderate. There are foreground to middleground views of rolling to angular, grass and oak woodland-covered hill slopes and ridges. The landscape is predominantly natural in appearance with a moderate degree of intactness and coherence of form and character. However, Cañada Road and the existing electric transmission tower with its substantial industrial character are prominent built features that diminish the scenic integrity of the existing landscape and reduce what would otherwise be a moderate-to-high level of visual quality.

**Viewer Concern:** high. Travelers on Cañada Road and users of the bike path and Crystal Springs Trail enjoy a predominantly natural setting with sightlines generally confined by roadside terrain and vegetation. Northbound travelers do not necessarily anticipate the abrupt presence of Tower 3/22 because until that point, the proposed route is substantially screened from view by adjacent terrain and vegetation. Therefore, any increase in industrial character or blockage of views from Cañada Road, the bike path, or trail would be seen as an adverse visual change and viewer concern is high.

**Viewer Exposure:** high. The proposed tower would be highly visible in the foreground of views from KVP 6 as the proposed route converges on and then parallels Cañada Road. The number of viewers would be moderate though the duration of view would be extended because of the tower's central position in the primary cone of vision of northbound travelers on Cañada Road.

**Overall Visual Sensitivity:** moderate-to-high. For northbound travelers on Cañada Road and users of the bike path and Crystal Springs Trail, the moderate visual quality, high viewer concern, and high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 7 – Interstate 280 Southbound at Highway 92**

Key Viewpoint 7 was established on southbound I-280, at the Highway 92 overpass (see Figure D.3-8A). The view is to the south toward Towers 3/19 through 4/24 (far right) as the route parallels the freeway to the west and then spans to Tower 4/25 on the east side of I-280 (to the left, just beyond the frame of view). This viewpoint is approximately 0.32 miles northwest of Tower 4/24 and was selected to characterize the existing landscape visible to southbound travelers on I-280 in the vicinity of the Tower 4/24-25 span. Views from southbound I-280 encompass a predominantly natural setting with limited development other than the I-280 corridor and the existing electric transmission line.

**Visual Quality:** moderate. Although foreground to middleground, rolling to angular, grass- and oak woodland-covered hills feature prominently in southbound I-280 views, overall visual quality is moderate due to the dominance of I-280, the I-280/Highway 92 interchange (just before the frame of view), and the adjacent electric transmission infrastructure. These built features with industrial character diminish both the scenic integrity and visual quality of the existing landscape.

**Viewer Concern:** moderate-to-high. Travelers enjoy the predominantly natural setting with distant, panoramic sightlines to the forested ridges west of I-280 and the rolling grasslands adjacent to I-280. However, along this portion of I-280, travelers anticipate the substantial presence of the I-280/Hwy. 92 infrastructure and the adjacent electric transmission line. Any increase in industrial character visible from I-280, built structural prominence, or blockage of views from I-280 would be seen as an adverse visible change.

**Viewer Exposure:** high. The proposed route would be highly visible in the foreground to middleground of views from KVP 7 as the proposed route parallels and then spans I-280. The number of viewers would also be high and the duration of view would be extended because the route would be located within the primary cone of vision of travelers on I-280 for some distance approaching the span.

**Overall Visual Sensitivity:** moderate-to-high. For travelers on I-280 in general and at KVP 7 specifically, the moderate visual quality, moderate-to-high viewer concern, and high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **D.3.1.2 Ralston Substation to Carolands Substation**

This portion of the Proposed Project would include Towers 5/28 through 8/50. From Ralston Substation, the route would pass along an open grass-covered hilltop behind the residential neighborhood along Lexington Avenue (Towers 5/29-6/36) before crossing San Mateo Creek and Crystal Springs Road near Crystal Springs Dam (Towers 6/36-7/39). The route then traverses grass hillsides and oak woodland behind the residential neighborhoods along Lakeview Drive (Towers 7/39-41) and Wedgewood Drive (Towers 7/42 and 7/43). This same route segment (Towers 7/41 and 7/42) passes immediately behind (east of) the Crystal Springs I-280 Rest Stop where the Junipero Serra Monument is located. The proposed route continues north along the west sides of Black Mountain Road and Skyline Boulevard (Towers 7/44-8/50) before connecting to the Carolands Substation on Skyline Boulevard. Residences are located along the east sides of Black Mountain Road and Skyline Boulevard.

Viewing opportunities along the Proposed Project between Ralston and Carolands Substations include I-280, Lexington Avenue, Bunker Hill Drive, Laurel Hill Drive, Seneca Lane, Crystal Springs Road, Berryessa Way, Lakeview Drive, Wedgewood Drive, Black Mountain Road, Hayne Road, Skyline Boulevard, and the Crystal Springs Rest Stop. A detailed visual analysis of the existing setting was conducted at four representative key viewpoints along this portion of the route and included: Lexington Avenue (KVP 8), Crystal Springs Rest Stop (KVP 9), I-280 Southbound (KVP 10), and Black Mountain Road (KVP 11).

The location of each of these KVPs is shown on Figure D.3-1. The results of the visual analysis are summarized in Appendix VR-1. A discussion of the visual setting for each KVP is presented in the following paragraphs.

#### **Key Viewpoint 8 – Lexington Avenue**

Key Viewpoint 8 was established on Lexington Avenue, approximately 250 feet east of the proposed route (see Figure D.3-9A). The view is to the south toward Tower 5/29. The proposed route in this area passes behind a residential neighborhood located along Lexington Avenue. This viewpoint was selected to characterize the existing landscape and viewing conditions typical of the residential areas

along this portion of the route. Public views of the proposed route from nearby streets are partially obstructed by trees and landscaping within residential yards and existing utility poles and lines that are located along the streets. Views from the predominantly single story residences that back onto the route on the west side of Lexington Avenue look out across the grassy hilltop to the forested ridges to the west of Crystal Springs Reservoir. Residences located immediately adjacent to an existing tower (two to three residences at each location) would also have a more direct view of the existing lattice structure.

**Visual Quality:** moderate. The residential landscape visible from Lexington Avenue consists primarily of established single story, single family residences with trees and landscaping and neighborhood streets lined with overhead utility infrastructure. Although the forested ridges west of Crystal Springs Reservoir are partially visible from some vantage points, the landscape visible from most public viewing opportunities generally lacks distinctive features or elements of visual interest.

**Viewer Concern:** high. Residential viewers in these neighborhoods would consider any increase in industrial character, transmission line structural prominence, or view blockage of the background sky and ridges an adverse visual change.

**Viewer Exposure:** moderate-to-high. The Proposed Project would be highly visible as a foreground landscape feature as the route passes immediately west of the Lexington Avenue residential area (and KVP 8). However, the views of some towers would be partially obstructed by intervening structures, vegetation, and utility infrastructure. Although the number of viewers would be low, the duration of view from the residences would be extended.

**Overall Visual Sensitivity:** moderate-to-high. For viewers within the Lexington Avenue residential neighborhood in general and at KVP 8 specifically, the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 9 – Crystal Springs Rest Area**

Key Viewpoint 9 was established at the Crystal Springs Rest Area on northbound I-280 (see Figure D.3-10A). The view is to the south toward Towers 6/35-7/40 (closest) as the proposed route parallels I-280 and approaches the rest area. This viewpoint is at the base of the Junipero Serra monument, which is approximately 0.13 miles north of Tower 7/40. This viewpoint was selected to characterize the existing landscape visible from the monument. Views from the monument encompass a varied landscape dominated by the hills and ridges that form the San Andreas rift valley, and the Crystal Springs Reservoir within. Also prominent in the view is I-280 corridor and the existing transmission line.

**Visual Quality:** moderate-to-high. Much of the landscape visible from the monument consists of foreground to background, open, panoramic views of grass-covered rolling hills and forested ridges that form the San Andreas rift valley. Central to the view and in contrast to the varied greens of the surrounding vegetation are the blue waters of Crystal Springs Reservoir, which add visual interest. While the landscape is predominantly natural in appearance with a moderate degree of intactness and coherence of form and character, the curvilinear ribbon of pavement defining I-280 and the vertical forms of the existing transmission towers with their industrial character feature prominently. It is these built features that diminish the scenic integrity of the existing landscape and reduce what would otherwise be a high level of visual quality.

**Viewer Concern:** high. Visitors to the monument enjoy a predominantly natural setting with distant, sightlines to the hills, ridges, and reservoirs west of I-280. Visitor expectations are typically high at

designated vista points and scenic overlooks. It is also reasonable to assume that many visitors to this location are first-time viewers that would not necessarily expect to see industrial features in the form of existing electric transmission lines in such close proximity to the overlook. Any increase in industrial character or blockage of views from the overlook would be seen as an adverse visual characteristic.

**Viewer Exposure:** high. The proposed towers would be highly visible in the foreground to middleground of views from KVP 9 as the proposed route converges on the Junipero Serra monument. The number of viewers would be moderate though the duration of view would be extended because of the static nature of viewing circumstance.

**Overall Visual Sensitivity:** high. For visitors to the Junipero Serra Monument, the moderate-to-high visual quality, high viewer concern, and high viewer exposure lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 10 – Interstate 280 Southbound**

Key Viewpoint 10 was established on southbound I-280, just north of the northbound I-280 Crystal Springs Rest Area (see Figure D.3-11A). The view is to the south toward Towers 7/39-41 (right to left). This viewpoint is was selected to characterize the existing landscape visible to southbound travelers on I-280 in the vicinity of the central portion of the Proposed Project.

**Visual Quality:** moderate-to-high. Much of the landscape visible from I-280 consists of foreground to middleground rolling, grass-covered hills and oak woodland, backdropped by more distant forested ridges. The landscape is substantially natural in appearance with a high degree of intactness and coherence of form and character, particularly west of I-280. However, the I-280 corridor and the existing electric transmission line (with its substantial industrial character) are prominent built features in views from I-280 and diminish the scenic integrity of the existing landscape and reduce what would otherwise be a high level of visual quality.

**Viewer Concern:** high. Travelers along I-280 enjoy the predominantly natural setting with distant, panoramic sightlines to the forested ridges west of I-280 and the rolling grasslands adjacent to I-280. Travelers anticipate the substantial presence of the I-280 corridor and existing electric transmission infrastructure. However, any increase in industrial character visible from I-280 or blockage of views from I-280 would be seen as an adverse visible change.

**Viewer Exposure:** high. The proposed route would be highly visible in the foreground to middleground of views from KVP 10 as the proposed route parallels I-280. The number of viewers would also be high and the duration of view would be extended because the route would be located within the primary cone of vision of travelers on I-280 for some distance as it parallels the freeway in close proximity.

**Overall Visual Sensitivity:** high. For southbound travelers on I-280 in general and at KVP 10 specifically, the moderate-to-high visual quality, high viewer concern, and high viewer exposure lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 11 – Black Mountain Road**

Key Viewpoint 11 was established on Black Mountain Road, approximately 0.56 miles south of Hayne Road and just south of Tower 8/46 (see Figure D.3-12A). The view is to the south toward Towers 7/44 and 7/45 (closest). The proposed route in this area passes in front of a residential neighborhood located along the east side of Black Mountain Road. This viewpoint was selected to characterize the existing landscape and viewing conditions typical of the residential area along this portion of the route.

As is apparent in Figure D.3-12A, there are unobstructed views of the proposed route from both private residential and public street viewing locations.

**Visual Quality:** moderate. The residential landscape visible from Black Mountain Road consists primarily of established single story, single family residences with trees and landscaping to the east of Black Mountain Road and undeveloped buffer land on the west side of Black Mountain Road. Utility infrastructure is present on both sides of the street though the west side of the street is noticeably less developed.

**Viewer Concern:** high. Residential viewers in this neighborhood would consider any increase in visible industrial character, transmission line structural prominence, or view blockage of the background sky and ridges an adverse visual change.

**Viewer Exposure:** moderate-to-high. The Proposed Project would be highly visible as a foreground landscape feature as the route passes immediately west of the Black Mountain Road residential area (and KVP 11). However, the views of some towers would be partially obstructed by intervening vegetation along Black Mountain Road. The number of viewers would be moderate and the duration of view from the residences would be extended (the duration of view for travelers on Black Mountain Road would be moderate). Overall viewer exposure is rated moderate-to-high.

**Overall Visual Sensitivity:** moderate-to-high. For viewers within the Black Mountain residential neighborhood in general and at KVP 11 specifically, the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **D.3.1.3 Carolands Substation to Transition Station**

This portion of the Proposed Project would include Towers 8/50 through 14/95. From Carolands Substation, the route would pass north behind the residential neighborhoods along Darrell Road, (Towers 8/50-52) before crossing to the west side of I-280 and passing through the Crystal Springs Golf Course (Towers 8/53-9/62). The proposed route then crosses back to the east side of I-280 and passes behind the residential neighborhoods along Skyview Drive and Loma Vista Drive (Towers 10/63-68). The route then spans I-280 to the west side and passes through watershed lands along the Sawyer Camp Trail, San Andreas Trail, and Skyline Boulevard to the transition station site (Towers 10/69-14/95)

Viewing opportunities along the Proposed Project between Carolands Substation and the Transition Station include I-280, Skyline Boulevard, Darrell Road, Crystal Springs Golf Course, Skyview Drive, Loma Vista Drive, Sawyer Camp Trail, San Andreas Trail, Sweeney Ridge, and San Bruno Avenue. A detailed visual analysis of the existing setting was conducted at seven representative key viewpoints along this portion of the route including: Crystal Springs Golf Course (KVP 12), I-280 Northbound (KVP 13), Sawyer Camp Trail (KVP 14), San Andreas Trail (KVP 15), Sweeney Ridge (KVP 16), Skyline Boulevard (KVP 17), and San Bruno Avenue (KVP 18).

The location of each of these KVPs is shown on Figure D.3-1. The results of the visual analysis are summarized in Appendix VR-1. A discussion of the visual setting for each KVP is presented in the following paragraphs.

#### **Key Viewpoint 12 – Crystal Springs Golf Course**

The proposed route passes along the east side of Crystal Springs Golf Course and through the golf course parking lot. Key Viewpoint 12 was established in the golf course parking lot adjacent to and north of the clubhouse (see Figure D.3-13A). The view is to the northwest down the north fairways

toward Towers 9/56 through 9/58 (right to left) as the proposed route exits the parking lot and parallels the north fairways.

**Visual Quality:** moderate-to-high. Much of the landscape visible from this location consists of foreground to middleground, highly manicured lawns and trees designed to provide high aesthetic appeal and views of the natural land and vegetative features west of I-280. The sculpted landscape exhibits a high degree of intactness and coherence of form and character with some visual variety and various hues of green coloration. However, this harmony of form and character is punctuated by the silver, vertical, industrial forms of the existing transmission line. It is these built features that diminish the scenic integrity of the existing landscape and reduce what would otherwise be a high level of visual quality.

**Viewer Concern:** high. Visitors to the golf course expect to see a landscape with high aesthetic appeal and characterized by a mosaic of natural vegetative forms. Although the existing transmission line is also a part of a repeat visitor's expectations, any additional intrusion of built structures with industrial character or blockage of views from any of the golf course grounds would be perceived as an adverse visual change.

**Viewer Exposure:** high. The proposed towers would be highly visible in the foreground of views from KVP 12 and the north fairways as the proposed route passes through the golf course. The number of viewers would be moderate and the duration of view would be extended because of the relatively static to slow pace of the viewing circumstance.

**Overall Visual Sensitivity:** high. For visitors to Crystal Springs Golf Course in general and KVP 12 specifically, the moderate-to-high visual quality, high viewer concern, and high viewer exposure lead to a high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 13 – Interstate 280 Northbound**

Key Viewpoint 13 was established on northbound I-280, just south of the Tower 10/68-69 span over I-280 (see Figure D.3-14A). The view is to the northwest toward Tower 10/69 as the route spans the freeway to the west. This viewpoint was selected to characterize the existing landscape visible to northbound travelers on I-280 in the vicinity of the Tower 10/68-69 span. Views from northbound I-280 encompass a predominantly natural setting with limited development other than I-280 and the existing electric transmission line.

**Visual Quality:** moderate. Although foreground to middleground rolling, grass- and oak woodland-covered hills and background angular, forested ridges west of I-280 feature prominently in northbound I-280 views, overall visual quality is moderate due to the prominence of I-280 and the adjacent electric transmission infrastructure. These built features with associated industrial character diminish both the scenic integrity and visual quality of the existing landscape.

**Viewer Concern:** moderate-to-high. Travelers on I-280 enjoy a predominantly natural setting with distant, panoramic sightlines to the forested ridges west of I-280 and the rolling grass- and oak woodland-covered hills adjacent to I-280. However, travelers also anticipate the presence of the I-280 infrastructure and the prominent transmission line Tower 10/69. Any increase in industrial character visible from I-280, built structural prominence, or blockage of views from I-280 would be seen as an adverse visible change and viewer concern is rated moderate-to-high.

**Viewer Exposure:** high. The proposed route would be highly visible in the foreground of views from KVP 13 as the proposed route spans I-280. The number of viewers would also be high and the duration of view would be extended because the route would be located within the primary cone of vision of northbound travelers on I-280 while approaching the span.

**Overall Visual Sensitivity:** moderate-to-high. For travelers on I-280 in general and at KVP 13 specifically, the moderate visual quality, moderate-to-high viewer concern, and high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 14 – Sawyer Camp Trail**

Key Viewpoint 14 was established on the Sawyer Camp Trail at a point where the trail crosses over San Andreas Lake Dam (see Figure D.3-15A). The view is to the north toward Towers 11/73 through 11/75 (right to left) as the proposed route parallels Sawyer Camp Trail through undeveloped watershed lands. This viewpoint was selected to characterize the existing landscape visible from the trail at the dam which is a popular viewing location.

**Visual Quality:** moderate-to-high. The landscape visible from the vista point is predominantly natural appearing, consisting of a foreground to middleground mosaic of rolling grass- and tree-covered hill slopes bordering the water expanse of San Andreas Lake. The vegetation is mottled in appearance with many hues of green contrasting with the deep blue of the lake waters. The landscape exhibits a moderately high degree of intactness and coherence of form and character with substantial visual variety. However, this harmony of form and character is punctuated by the silver, vertical forms of the existing transmission line towers. It is these built features with their inherent industrial character that diminish the scenic integrity of the existing landscape and reduce what would otherwise be a high level of visual quality.

**Viewer Concern:** high. Trail users anticipate a predominantly natural setting with distant, panoramic sightlines across the lake waters to the hills, valley floor, and forested ridges west of I-280. Any increase in visible industrial character or structural prominence, or blockage of views from the trail in general and KVP 14 (on the dam) in particular would be seen as an adverse visual change. Therefore, viewer concern is high.

**Viewer Exposure:** moderate-to-high. The proposed towers would be highly visible in the foreground of views from KVP 14 as the proposed route parallels the Sawyer Camp Trail through the undeveloped watershed. The number of viewers would be low-to-moderate though the duration of view would be extended because of the static nature of viewing circumstance.

**Overall Visual Sensitivity:** moderate-to-high. For recreationists on the Sawyer Camp Trail in the vicinity of San Andreas Lake Dam, the moderate-to-high visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 15 – San Andreas Trail**

Key Viewpoint 15 was established on the San Andreas Trail between Towers 13/83 and 13/84 (see Figure D.3-16A). The view is to the northwest toward Tower 13/84. This viewpoint was selected to characterize the existing landscape visible from the trail where users have the first northbound open views of San Andreas Lake.

**Visual Quality:** moderate. The landscape visible from KVP 15 is substantially natural appearing, consisting of a foreground to middleground mosaic of rolling grass- and tree-covered hill slopes bordering San Andreas Lake. The vegetation is mottled in appearance with many hues of green contrasting with the deep blue of the lake waters. The landscape exhibits a moderate degree of intactness and coherence of form and character with substantial visual variety. However, this harmony of form and character is substantially degraded by the prominent industrial form and character of the existing transmission line,

which impairs views of the lake and more distant terrain, diminishes the scenic integrity of the existing landscape, and reduces what would otherwise be a high level of visual quality to a moderate level.

**Viewer Concern:** high. Trail users anticipate a predominantly natural setting with distant, panoramic sightlines across the lake waters to the hills and forested ridges west of the lake. Although trail users also anticipate the highly prominent electric transmission infrastructure along this portion of the trail, any increase in industrial character or structural prominence, or blockage of views from the trail would be perceived as an adverse visual change.

**Viewer Exposure:** moderate-to-high. The proposed tower would be highly visible in the foreground of views from KVP 15 as the proposed route parallels the San Andreas Trail between the trail and San Andreas Lake. The number of viewers would be low-to-moderate though the duration of view would be extended.

**Overall Visual Sensitivity:** moderate-to-high. For recreationists on the San Andreas Trail in the vicinity of KVP 15, the moderate visual quality, high viewer concern, and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 16 – Sweeney Ridge Bay Discovery Site**

Key Viewpoint 6 was established on Sweeney Ridge adjacent to the Bay Discovery Site (see Figure D.3-17A). The view is to the east toward the Proposed Project in the vicinity of Towers 13/83 to 14/91 (right to left) as the proposed route parallels Skyline Boulevard along the east side of San Andreas Lake. This viewpoint is approximately 1.3 miles west of the proposed route and was selected to characterize the existing landscape visible from Sweeney Ridge and the Bay Discovery Site which is part of the Golden Gate National Recreation Area. Views from this vista point encompass a broad portion of the southern San Francisco Bay Area landscape including the predominantly natural forms and character comprising the peninsula watershed and San Andreas Lake, the intensely urban areas along the margins of San Francisco Bay and the expansive Bay waters backdropped by the East Bay hills.

**Visual Quality:** high. This vantage point captures a high degree of visual variety within a panoramic view, illustrating much of what is at the heart of the Bay Area aesthetic reputation—the juxtaposition of undeveloped natural areas, against urban landscapes, backdropped against blue Bay waters and distant bordering hills and ridgelines. In spite of its complexity, this landscape mosaic exhibits a high degree of intactness and coherence of form and character as it transitions from one landscape type to another. Although the existing transmission line is visible from KVP 16, it is not prominent due to its small scale at this viewing distance and the broader urban context (and coloration) in the background.

**Viewer Concern:** high. Visitors to Sweeney Ridge and the Bay Discovery Site encounter dramatic, panoramic sightlines across the San Francisco Peninsula to San Francisco Bay and the East Bay Hills beyond (on a clear day). Visitor expectations are typically high at scenic overlooks and vista points. Therefore, any increase in industrial character visible from Sweeney Ridge or blockage of views from the overlook would be seen as an adverse visual change.

**Viewer Exposure:** moderate. The Proposed Project would be highly visible in the middleground of views from KVP 16 as the proposed route parallels Skyline Boulevard and the eastern shore of San Andreas Lake. However, the number of viewers would be low though the duration of view would be extended because of the static nature of viewing circumstance.



**Overall Visual Sensitivity:** moderate-to-high. For visitors to Sweeney Ridge and the Bay Discovery Site, the high visual quality and viewer concern is partially offset by the moderate viewer exposure (due to the low number of viewers), leading to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 17 – Skyline Boulevard**

Key Viewpoint 17 was established on northbound Skyline Boulevard, just south of Tower 14/90 (see Figure D.3-18A). The view is to the north toward Towers 14/90 through 14/93 (left to right). The proposed route in this area parallels the west side of Skyline Boulevard between the San Andreas Trail and San Andreas Lake. This viewpoint was selected to characterize the existing landscape and viewing conditions typical along this portion of Skyline Boulevard and the San Andreas Trail. As is apparent in Figure D.3-18A, there are unobstructed views of the proposed route from both the road and trail.

**Visual Quality:** moderate. This transition landscape between urban uses and undeveloped watershed lands is highly influenced by the immediate foreground electric transmission infrastructure and roadway that intersect views to the undeveloped, grass- and shrub-covered hills that form the backdrop to views from Skyline Boulevard. Sightlines to the hills are particularly impaired because of the short span distances that result in numerous transmission towers. The silver color of the towers also contrasts with the darker greens and tans of the background hills.

**Viewer Concern:** moderate-to-high. Travelers on Skyline Boulevard anticipate a landscape with a distinct immediate-foreground characterized by urban features (utilities and road) and a middleground consisting of natural appearing forms and character. Any increase in industrial character or prominence that is noticeable from Skyline Boulevard (or the San Andreas Trail), or blockage of views to the undeveloped hills would be perceived as an adverse visual change.

**Viewer Exposure:** high. The Proposed Project would be highly visible in the foreground of views from KVP 17 as the proposed route parallels Skyline Boulevard and the San Andreas Trail along the eastern shore of San Andreas Lake. The number of viewers would be moderate-to-high and the duration of view would be extended because the proposed route would be central to the primary cone of vision along Skyline Boulevard and visible for a substantial distance.

**Overall Visual Sensitivity:** moderate-to-high. For northbound travelers along Skyline Boulevard (and users of the San Andreas Trail), the moderate visual quality, moderate-to-high viewer concern, and high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics.

### **Key Viewpoint 18 – Transition Station / San Bruno Avenue**

The proposed transition station site is highly visible from San Bruno Avenue, Skyline Boulevard, and the Sky Crest shopping center. There are also views of the site from a limited number residences including the Skycrest Apartments to the south of the shopping center, several single family homes along Estates Drive to the north of the site, and a number of single family homes along Monterey Drive in the hills west of Skyline Boulevard. Key Viewpoint 18 was established on San Bruno Avenue across from the Transition Station site, just east of the intersection with Skyline Boulevard (see Figure D.3-19A). The view is to the northwest toward the abandoned lot that is the proposed site for the transition station. This viewpoint was selected to characterize the existing landscape and viewing conditions from San Bruno Avenue and the adjacent Sky Crest Center.

**Visual Quality:** moderate. with The foreground to middleground suburban landscape comprised of residential and commercial uses and utility infrastructure. Portions of the landscape are predominantly natural in

appearance, hosting a mosaic of vegetation types and green coloration. However the landscape generally lacks scenic features or elements of visual interest. In addition the proposed transition station site is degraded and the existing transmission line contributes a prominent industrial character to the landscape.

**Viewer Concern:** moderate. Travelers on San Bruno and visitors to the commercial center anticipate a somewhat degraded foreground landscape backdropped by substantial residential development and prominent utility infrastructure. However, any increase in industrial character or further visual degradation of the area would be perceived as an adverse visual change.

**Viewer Exposure:** moderate-to-high. The proposed transition station site would be highly visible in the foreground of views from KVP 18 and the adjacent commercial center. The number of viewers would be moderate as would the duration of view.

**Overall Visual Sensitivity:** moderate. For northbound travelers on San Bruno Avenue and visitors to the commercial center, the moderate visual quality and viewer concern, and moderate-to-high viewer exposure lead to a moderate overall visual sensitivity of the visual setting and viewing characteristics.

### **D.3.1.4 Underground Segment**

#### **San Bruno Avenue**

East of the transition station, the landscape along San Bruno Avenue is characterized by suburban residential development that either backs on to San Bruno Avenue, fronts onto a separated frontage road, or is located substantially above or below the grade elevation of San Bruno Avenue. In most cases, views of San Bruno Avenue from these residential areas are substantially screened by roadside trees and vegetation. To the east of I-280, the landscape gradually becomes more urban as commercial and office uses predominate, though some residential use is still present. From Elm Street to the BART right-of-way, the landscape is decidedly urban in character with commercial land uses dominant on both the north and south sides of San Bruno Avenue. Visual quality along this portion of the route is low-to-moderate while viewer concern ranges from moderate for travelers to moderate-to-high for residents along San Bruno Avenue. Overall viewer exposure to this route segment is high. The resulting overall visual sensitivity would be moderate-to-high.

#### **BART ROW**

From San Bruno Avenue, the route would turn north under Huntington Avenue, following the BART ROW. This portion of the route passes through an urban landscape dominated by commercial and industrial character. Though there is some residential development along the west side of Huntington just north of San Bruno Avenue, a majority of the route to Sneath Lane is dominated by BART facilities and the Tanforan Park retail center. North of Sneath Lane, the route passes behind commercial and residential development. Views of the route are available to motorists and pedestrians on existing roadways and residents adjacent to the route. Visual quality along this portion of the route is low-to-moderate while viewer concern ranges from moderate for travelers to moderate-to-high for residents. Overall viewer exposure to this route segment is high. The resulting overall visual sensitivity would be moderate-to-high.

#### **Colma to Martin Substation**

The proposed route diverges from the BART ROW at Lawndale Avenue and turns east to Hillside Boulevard where it turns northwest. Along Hillside Boulevard, the landscape is characterized initially by cemeteries on the west side and nurseries on the east side. Further north, the nurseries give way to

cemeteries, which generally line both sides of Hillside Boulevard up to Hoffman Street. Turning northeast on Hoffman Street, residential development lines the north side while a cemetery borders the south side of Hoffman Street. The route continues to pass through suburban landscapes as it turns northwest on Orange Street and then northeast on Guadalupe Parkway. Shortly after turning on Guadalupe Parkway, urban development gives way to undeveloped open space through San Bruno Mountain State and County Park. As the route nears Bayshore Boulevard to the east of San Bruno Mountain, it passes residential and office park uses. The landscape along Bayshore Boulevard is characterized by industrial uses and vacant parcels that previously accommodated industrial uses. Visual Quality along this route segment ranges from low-to-moderate in the more urban areas to moderate along Guadalupe Canyon Parkway through San Bruno Mountain State and County Park. Viewer concern ranges from moderate in the commercial areas to moderate-to-high in the residential areas and State and County Park. Overall viewer exposure to this route segment is high. The resulting overall visual sensitivity would be moderate-to-high.

### **D.3.2 Applicable Regulations, Plans, and Standards**

Public agencies and planning policy establish visual resource management objectives in order to protect and enhance public scenic resources. Goals, objectives, policies, and implementation strategies and guidance are typically contained in resource management plans, comprehensive plans and elements, and local specific plans. There are three jurisdictional planning documents containing 15 objectives, policies, designations, or guidance pertinent to visual resources for the Proposed Project. These planning directives and the Proposed Project's consistency with them are addressed in the Section D.2.2, Land Use. Overall, the Proposed Project was found to be consistent with applicable policy in one instance. In two instances, the project was found to be partially consistent. In 12 cases the project was deemed inconsistent with applicable policies. However, in all cases, following effective implementation of the proposed mitigation measures or alternatives considered in this EIR, the transmission line project would be consistent with all relevant guidance. Although the transition station is located within the City of San Bruno, no visual resources policies were found to be applicable to the Proposed Project.

### **D.3.3 Environmental Impacts and Mitigation Measures for the Proposed Project**

An *adverse visual impact* occurs within public view when: (1) an action perceptibly changes existing features of the physical environment so that they no longer appear to be characteristic of the subject locality or region; (2) an action introduces new features to the physical environment that are perceptibly uncharacteristic of the region and/or locale; or (3) aesthetic features of the landscape become less visible (e.g., partially or totally blocked from view) or are removed. Changes that seem uncharacteristic are those that appear out of place, discordant, or distracting. The degree of the visual impact depends upon how noticeable the adverse change may be. The noticeability of a visual impact is a function of project features, context, and viewing conditions (angle of view, distance, and primary viewing directions). The key factors for consideration in determining the degree of visual impact are visual contrast, project dominance, and view blockage or impairment which have been discussed above in the introductory paragraphs to visual resources (see pages D.3-1 and D.3-2).

Assessment of the likely visual impacts that would occur as a result of the Proposed Project (and alternatives) was accomplished by establishing representative viewpoints from which to conduct a detailed analysis of the project. At each of these Key Viewpoints (KVPs), field analysis included assessment of visual contrast, project dominance, and view blockage. Subsequently, a conclusion was

made regarding the extent of overall visual change, and taken together with the existing landscape's visual sensitivity, the level of probable visual impact significance was determined. A visual simulation was also prepared with which to further evaluate the preliminary impact determination. A conclusion on initial impact significance was then arrived at. If a determination was made that the resulting impact would be significant, the impact situation was further evaluated against the application of feasible mitigation measures in an effort to reduce the visual impact to a level of less than significant if possible. A final conclusion on impact significance was then reached. The results of the visual analysis conducted for the Proposed Project and each of the alternatives is presented in the Visual Analysis Summary foldout tables provided in Appendix VR-1 at the end of the Visual Resources section. Also provided at the end of the Visual Resources section are all Key Viewpoint Existing Setting Photographs and Visual Simulations.

### **D.3.3.1 Significance Criteria**

The criteria used to assess the significance of visual impacts resulting from a project take into consideration the factors described above, as well as federal, State, and local policies and guidelines pertaining to visual resources. Appendix G of the CEQA Guidelines identifies the following four circumstances that can lead to a determination of significant visual impact:

- The project has a substantial adverse effect on a scenic vista.
- The project substantially damages scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.
- The project substantially degrades the existing visual character or quality of the site and its surroundings.
- The project creates a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

A fifth circumstance potentially leading to a significant visual impact would be:

- The project results in an inconsistency with regulations, plans, and standards applicable to the protection of visual resources.

In the present methodology, the degree of impact significance is generally arrived at as a function of overall visual sensitivity and visual change. Table D.3-1 illustrates the general interrelationship between visual sensitivity and visual change and is used primarily as a consistency check between individual KVP evaluations. Actual parameter determinations (e.g., visual contrast, project dominance, and view blockage) are primarily based on analyst experience and site-specific circumstances.

The interrelationships presented in Table D.3-1 are intended as guidance only, recognizing that site-specific circumstances may warrant a different outcome. However, it is reasonable to conclude that lower visual sensitivity ratings paired with lower visual change ratings will generally correlate well with lower degrees of impact significance when viewed on-site. Conversely, higher visual sensitivity ratings paired with higher visual change ratings will tend to result in higher degrees of visual impact occurring at the site.

Implicit in this rating methodology is the acknowledgment that, for a visual impact to be considered significant, two conditions generally exist: (1) the existing landscape is of reasonably high quality and is relatively valued by viewers; and (2) the perceived incompatibility of one or more Proposed Project elements or characteristics tends toward the high extreme, leading to a substantial reduction in visual quality.

Visual impacts are classified as: Class I (significant, cannot be mitigated to a level that is not significant), Class II (significant, can be mitigated to a level that is not significant), or Class III (adverse, but not significant).

Impact V-1 relates to construction of the Proposed Project; all subsequent impacts address the visual impact of the presence of project components during operation.

**Table D.3-1. General Guidance for Review of Impact Significance**

OVERALL VISUAL SENSITIVITY	OVERALL VISUAL CHANGE				
	Low	Low to Moderate	Moderate	Moderate to High	High
Low	Not Significant <sup>1</sup>	Not Significant	Adverse but Not Significant	Adverse but Not Significant	Adverse but Not Significant
Low to Moderate	Not Significant	Adverse but Not Significant	Adverse but Not Significant	Adverse but Not Significant	Adverse and Potentially Significant
Moderate	Adverse but Not Significant <sup>2</sup>	Adverse but Not Significant	Adverse but Not Significant	Adverse and Potentially Significant	Adverse and Potentially Significant
Moderate to High	Adverse but Not Significant	Adverse but Not Significant	Adverse and Potentially Significant	Adverse and Potentially Significant	Significant <sup>4</sup>
High	Adverse but Not Significant	Adverse and Potentially Significant <sup>3</sup>	Adverse and Potentially Significant	Significant <sup>4</sup>	Significant

<sup>1</sup> Not Significant impacts may or may not be perceptible but are considered minor in the context of existing landscape characteristics and view opportunity.

<sup>2</sup> Adverse but Not Significant Impacts are perceived as negative but do not exceed environmental thresholds.

<sup>3</sup> Adverse and Potentially Significant impacts are perceived as negative and may exceed environmental thresholds depending on project and site-specific circumstances.

<sup>4</sup> Significant impacts with feasible mitigation may be reduced to levels that are not significant or avoided all together. Without mitigation, significant impacts would exceed environmental thresholds.

### D.3.3.2 Applicant Proposed Measures

Table D.3-2 lists the 16 Applicant Proposed Measures (APMs) for visual resource measures presented by PG&E in the Proponent’s Environmental Assessment (PG&E, 2002). This analysis assumes implementation of all APMs; in many cases additional mitigation is proposed as determined necessary to reduce project impacts to less than significant levels.

### D.3.3.3 230 kV/60 kV Overhead Transmission Line

Since the issuance of the Draft EIR, the Applicant has conducted an additional analysis of the results of some mitigation measures presented in this section, in which certain proposed towers would be eliminated. In some cases, the resulting height of the remaining towers would exceed 30%, which is found in this EIR to be the amount that could be added without changing the impact significance. As a result, some of the mitigation measures presented in this section have been revised in order to reduce increased height of the remaining towers.

**Impact V-1: Visibility of Construction Activities and Equipment**

Construction impacts on visual resources would result from the presence of equipment, materials, and work force at the substation sites, staging areas, and along the overhead and underground routes. Construction impacts on visual resources would also result from the temporary alteration of landforms and vegetation along the right-of-way (ROW). Vehicles, heavy equipment, project components, and workers would be visible during site clearing, grading, substation construction, structure erection, conductor stringing, trenching, cable placement, and site/ROW clean-up and restoration. Construction equipment and activities would be seen by various viewers in close proximity to the sites and ROW including adjacent and nearby residents, recreationists on trails and roads, motorists, and pedestrians. View durations would vary from brief to extended. Construction activities would be most visible for those elements of the Proposed Project or alternatives through residential neighborhoods and adjacent to major travel corridors (such as I-280 and Skyline Boulevard).

The construction of the transmission line and substations, modification of existing substations, and use of construction staging areas would result in the visual intrusion of construction vehicles, equipment, storage materials, and workers. However, due to the relatively short duration of project construction, project construction impacts would generally constitute adverse, but not significant (Class III) visual impacts. In order to ensure that viewers are not unnecessarily impacted during construction, Mitigation Measure V-1a and APMs 8.1 through 8.3 (presented in Table D.3-2) are recommended.

**Table D.3-2. Applicant Proposed Measures – Visual Resources**

APM*	Description
<b>CONSTRUCTION</b>	
8.1	<b>Storage and Site Cleanup (Mileposts 0 to 14.7).</b> PG&E will keep construction-related activity as clean and inconspicuous as practical by storing building materials and equipment with the proposed construction staging areas or generally away from public view and removing construction debris promptly at regular intervals.
8.2	<b>Recontouring (Mileposts 0-14.7).</b> Recontouring of disturbed, graded areas at the structure, substation and tap locations will be implemented to provide a natural appearing landform upon completion of construction.
8.3	<b>Revegetation (Mileposts 0 to 14.7).</b> Revegetation at the structure, substation and tap locations using methods that are consistent with Edgewood County Park or SFPUC Watershed resource management practices as appropriate will be implemented to restore the landscape's natural appearance.
<b>OPERATION</b>	
8.4	<b>Edgewood Park (Mileposts 0 to 1).</b> In order to reduce their potential to appear visually prominent from locations along Edgewood Park recreation trails, PG&E shall, in consultation with San Mateo County Parks and Recreation, install site-specific plantings of native tree and/or shrub planting as appropriate at key locations between the trails and those proposed replacement towers located in the immediate foreground of views from trails to partially screen views of the Project. Selected plant material shall be appropriate to the Edgewood Park setting and shall conform to the County's vegetation management policies for the Park.
8.5	<b>Watershed Trails (Mileposts 3.3 to 4.3 and 11 to 14.1).</b> In order to reduce the Project's potential to appear visually prominent as seen from the San Francisco Watershed public recreation trails PG&E shall, in consultation with the San Francisco PUC Resource Management staff, install site-specific native tree and/or shrub plantings at key locations between the trails and those proposed replacement towers located in the immediate foreground of views from trails to partially screen views of the Project. Selected plant material shall be appropriate to the Watershed setting and shall conform to the SFPUC Watershed vegetation management policies.
8.6	<b>Views from I-280.</b> In consultation with the SFPUC Resource Management staff, PG&E shall install site-specific planting to partially screen views of the proposed replacement towers that would be seen along the skyline in foreground views from I-280. The plant material will be native species appropriate to the Watershed lands and shall conform to the SFPUC Watershed vegetation management policies. The trees shall be placed so as to maximize screening effect and to generally preserve existing open landscape vistas.

**Table D.3-2. Applicant Proposed Measures – Visual Resources**

APM*	Description
8.7	<b>Enhancement of Views from I-280 and Watershed Trails.</b> In consultation with the SFPUC Resource Management staff, PG&E shall selectively prune trees and shrubs and/or remove trees in order to enhance views and vistas seen from the I-280 corridor and key Watershed recreation trails. Pruning and tree removal implemented under this measure shall be consistent with existing SFPUC Watershed resource management plans and shall conform to SFPUC Watershed vegetation management policies.
8.8	<b>Skyline Boulevard (Mileposts 14.0 to 14.7).</b> Informal planting of small trees and/or shrubs shall be installed intermittently as key locations along the west side of Skyline Boulevard in order to partially screen views of the proposed replacement poles. The plantings shall be spaced at sufficient intervals so as to allow intermittent open vistas toward the distant mountains. The plant material will be native species appropriate to the Watershed lands and shall conform to the SFPUC Watershed vegetation management policies. The plantings shall also be consistent with CPUC and PG&E regulatory and technical requirements for landscaping in proximity to transmission lines.
8.9	<b>Crystal Springs Golf Course (Milepost 9.2).</b> A tubular steel pole rather than a lattice tower shall be installed at the edge of the putting green and parking lot in Crystal Springs Golf Course.
8.10	<b>Black Mountain Road Area (Mileposts 7.5 to 8.5).</b> In order to reduce the proposed replacement poles' visibility as seen from the residential area near Black Mountain Road in Hillsborough, PG&E shall use replacement poles with a narrower diameter "slim profile" design to minimize their apparent mass. In addition, PG&E shall, in consultation with the SFPUC Resource Management staff, install site-specific plantings within the utility easement or off-site at key locations in order to partially screen views of the replacement poles. Plant material shall be appropriate to the local landscape setting and shall conform to Hillsborough planning and design guidelines.
8.11	<b>Lexington Avenue Area (Mileposts 5.3 to 6.0).</b> In order to reduce the proposed replacement towers' overall visual impact as seen from the residential area near Lexington Avenue, PG&E shall install site-specific plantings within the utility easement or off-site at key locations in order to partially screen views of the replacement poles. Plantings may include street trees along Lexington Avenue or at specific residential properties. Selected plant material shall be appropriate to the local landscape setting and shall conform to local/County planning and design guidelines.
8.12	<b>Substation and Transition Station Glare.</b> To minimize potential glare from the substations and the transition station, proposed structures at these sites, including fences, will be painted or finished with a non-reflective treatment.
8.12A	<b>Substation and Transition Station Lighting.</b> Exterior lighting at substations will include the use of non-glare light bulbs. Lighting fixtures will be located and designed to avoid casting light or glare on off-site locations.
8.13	<b>Transition Station Landscaping (Milepost 14.7).</b> In addition to the transition station landscaping proposed as part of the Project, PG&E shall install informal tree and shrub grouping intermittently along the west and north sides of the block wall in order to visually integrate the facility with the surrounding landscape and to screen potential views from Skyline Boulevard and the existing residences located to the north. Plant material shall be appropriate to the local landscape setting, shall conform to San Bruno planning and design guidelines and shall be consistent with CPUC and PG&E regulatory and technical requirements for landscaping in proximity to transmission lines.
8.14	<b>Jefferson Substation (Milepost 0).</b> PG&E shall install informal native plantings in order to reduce the visibility of the proposed modifications at the Jefferson Substation as seen from recreation trails and from Cañada Road. Plant material shall be appropriate to the local and Edgewood Park landscape setting and shall be consistent with CPUC and PG&E regulatory and technical requirements for landscaping in proximity to transmission lines. Recontouring of disturbed, graded areas will be implemented to provide a natural appearing landform upon completion of construction.
8.15	<b>Transmission Tower and Pole Finish.</b> To minimize potential Project-related glare effects and to better integrate the Project's appearance with respect to the surrounding landscape during the initial period of 1 to 2 years following construction, PG&E shall specify a non-reflective/non-glare finish for all transmission poles and towers to be installed along Segment 1 of the Project route.

\*Source: Section 8.4, pages 8-108 to 8-120 of the Proponent's Environmental Assessment

**Mitigation Measure for Impact V-1**

**V-1a Reduce visibility of construction activities and equipment.** If visible from nearby residences and roadways, ~~project substation and transition station~~ construction sites ~~(not including under-ground construction routes)~~ as well as all staging and material and equipment storage areas shall be visually screened with temporary screening fencing. Fencing will be of an appropriate design and color for each specific location. All evidence of construction activities, including ground disturbance due to staging and storage areas, shall be removed and all disturbed areas shall be remediated to an original or improved condition upon completion of construction including the

replacement of any vegetation or paving removed during construction. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

## Jefferson Substation to Ralston Substation

Visual impacts resulting from project operation between Jefferson Substation and Ralston Substation (proposed Towers 0/1 through 4/27) would primarily be experienced from recreation areas and trails and roadways. Specific areas of concern include Edgewood County Park, Pulgas Ridge Open Space, northbound and southbound I-280 and Cañada Road, northbound and southbound I-280 vista points, Crystal Springs Trail, and the Filoli Center. Based on a preliminary field reconnaissance, it was determined that the Filoli Center would not be visually impacted by the Proposed Project due to the amount of vegetative and structural screening (the Filoli buildings) that would obscure views of the Proposed Project. It was also determined that visual impacts on Pulgas Ridge Open Space would be similar to those experienced at Edgewood County Park because of the similar landscape characteristics, transmission line structure locations, and viewing perspectives. It was also determined that the Proposed Project's visual impact on the northbound I-280 vista point would consist of a slightly noticeable increase in structural prominence, which would be adverse but less than significant, primarily because project structures would be visible within the primary cone of vision of motorists on I-280 for a relatively brief amount of time. Therefore, the following seven key viewpoints (KVPs), each representing a visual impact of the Proposed Project, were selected to represent the visual impacts that would occur along this route segment.

### Impact V-2: Key Viewpoint 1 – Edgewood County Park

Figure D.3-2A presents the existing view to the south from Key Viewpoint 1 on the south loop of the Serpentine Trail in Edgewood County Park. Figure D.3-2B presents a visual simulation that depicts the replacement of the existing 60 kV transmission line with the Proposed Project's Towers 0/3 and 0/4 (left to right in the simulation). Tower 0/3 would replace an 89.5-foot tall lattice structure with a 115-foot tall lattice structure, representing an approximately 28% increase in structure size. Tower 0/4 would replace a 117-foot tall lattice structure with a 135-foot tall lattice structure, representing a 15% increase in structure size. The increase in the size of the structures would result in several adverse visual effects. Additional structure height would cause additional structure skylining (extending above the horizon line), particularly for Tower 0/3 where from some vantage points (such as illustrated in Figure D.3-2B), the existing structure only slightly extends above the horizon line. The increased height would also raise the conductors such that more of the ridgeline in the background could become more visually obstructed (depending on viewing position, lighting circumstances, and time of day). The increased structure size would also cause increased structure prominence and a visible increase in industrial character. As a result, visual contrast would be moderate-to-high and the Proposed Project would appear co-dominant with the existing landform features. The new and increased structure skylining and additional obstruction of the background ridgeline would result in a moderate-to-high degree of view blockage.

The overall visual change would be moderate-to-high and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant (Class I). No mitigation is available that could reduce this impact to less than significant levels while leaving the towers in approximately the same locations. Note that this impact would be eliminated with implementation of the Partial Underground Alternative that relocates the proposed route to the west side of I-280 between Jefferson Substation and Tower 1/12 (see Section D.3.4.2 and Figure Ap.1-3a in Appendix 1)



Figure D.3-2A. Existing View – Key Viewpoint 1, Edgewood County Park  
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Figure D.3-2B. Visual Simulation – Key Viewpoint 1, Edgewood County Park  
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### **Impact V-3: Key Viewpoint 2 – Interstate 280 Southbound**

Figure D.3-3A presents the existing view to the south from Key Viewpoint 2 on the southbound I-280, just past the Edgewood Road off-ramp. Figure D.3-3B presents a visual simulation that depicts the replacement of the existing 60 kV transmission line with the Proposed Project's Towers 0/3, 0/4, and 0/5 (right to left in the simulation). Tower 0/3 would replace an 89.5-foot tall lattice structure with a 115-foot tall lattice structure, representing an approximately 28% increase in structure size. Tower 0/4 would replace a 117-foot tall lattice structure with a 135-foot tall lattice structure, representing a 15% increase in structure size. Tower 0/5 would replace a 97-foot tall lattice structure with a 120-foot tall lattice structure, representing a 24% increase in structure size. The increase in the size of the structures would result in several noticeable adverse visual effects. Additional structure height would cause additional structure skylining (extending above the horizon line) and a further raising of the conductors above the background horizon line, potentially increasing their visibility when viewed from portions of I-280 (depending on light conditions and time of day). The increased structure size would also cause increased structure prominence. The resulting visual contrast would be moderate and the Proposed Project would appear co-dominant with the existing landscape features. The increased structure skylining and additional obstruction of the background sky by structures and conductors would result in a moderate degree of view blockage.

The overall visual change would be moderate and in the context of the existing landscape's high visual sensitivity, the resulting visual impact would be significant (Class I). No mitigation is available that would reduce this impact to less than significant levels while leaving the towers in the proposed locations.

Note that Impact V-3 would be eliminated with implementation of the Partial Underground Alternative (see Section D.3.4.2). A visual simulation of the Partial Underground Alternative and its effect on views from southbound I-280 (KVP 2) is presented as Figure D.3-3C. As shown in the simulation, the prominent, industrial-appearing towers along the east side of the freeway would be eliminated, thus opening up unobstructed views to the rolling hills along the Pulgas Ridge Open Space and Edgewood County Park. There would be limited visibility of the towers along Cañada Road from I-280 because they would be mostly screened from view by existing vegetation. In the alternative routing, the towers located in more open terrain nearer to the intersection of Edgewood Road and Cañada Road would be beyond the primary cone of vision of southbound travelers on I-280. The resulting visual impact on views from I-280 would not be significant; this would be a Class III impact for the Partial Underground Alternative from Key Viewpoint 2.

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Figure D.3-3A. Existing View – Key Viewpoint 2, Interstate 280 Southbound  
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Figure D.3-3B. Visual Simulation – Key Viewpoint 2, Interstate 280 Southbound  
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Figure D.3-3C. Visual Simulation – Key Viewpoint 2, Interstate 280 Southbound, with Route Relocation  
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### **Impact V-4: Key Viewpoint 3 – Interstate 280 Northbound**

Figure D.3-4A presents the existing view to the north from Key Viewpoint 3 on northbound I-280, adjacent to the Edgewood Road off-ramp. Figure D.3-4B presents a visual simulation that depicts the replacement of the existing 60 kV transmission line with the Proposed Project's Towers 1/7, 1/8, and 1/9 (right to left in the simulation). Tower 1/7 would replace a 114.5-foot tall lattice structure with a 140-foot tall lattice structure, representing an approximately 22% increase in structure size. Tower 1/8 would replace a 90.5-foot tall lattice structure with a 106.5-foot tall lattice structure, representing an 18% increase in structure size. Tower 1/9 would replace an 89.5-foot tall lattice structure with a 105-foot tall lattice structure, representing a 17% increase in structure size. The increase in the size of the structures would result in several noticeable adverse visual effects. Additional structure height would cause additional structure skylining (extending above the horizon line) and increased structure prominence. The more prominent vertical forms and lines would contrast with the horizontal to curvilinear forms and lines of the existing landforms. The resulting visual contrast would be moderate. The Proposed Project would appear co-dominant with the existing landscape features due to the prominence of the fully skylined structures which would be centrally positioned in the primary cone of vision of northbound travelers. View blockage of the background sky would be moderate. The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). Note that, as with Impacts V-2 and V-3, Impact V-4 would be eliminated with implementation of the Partial Underground Alternative (see Section D.3.4.2).

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Figure D.3-4A. Existing View – Key Viewpoint 3, Interstate 280 Northbound  
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Figure D.3-4B. Visual Simulation – Key Viewpoint 3, Interstate 280 Northbound  
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### Impact V-5: Key Viewpoint 4 – Cañada Road at Filoli Center

Figure D.3-5A presents the existing view to the southeast from Key Viewpoint 4 on southbound Cañada Road, just north of the entrance to the Filoli Center. Figure D.3-5B presents a visual simulation that depicts the replacement of the existing 60 kV transmission line with the Proposed Project's Towers 1/8 through 2/13 (far left). Tower 2/13, which would be the most visible of the proposed structures along this portion of Cañada Road would replace a 99-foot tall lattice structure with a 141.5-foot tall lattice structure, representing an approximately 43% increase in structure size. The increase in the size of the structure would result in several adverse visual effects. The substantial increase in structure height would cause additional structure skylining and would raise the conductors further above the horizon line, which could make them more prominent (depending on viewing position, lighting circumstances, and time of day). The increased structure size would also cause a significant increase in structure prominence and industrial character when viewed from Cañada Road and when exiting the Filoli Center. As a result, visual contrast would be moderate-to-high and the Proposed Project would appear co-dominant with the existing land and vegetative forms. The increased structure skylining and additional obstruction of the background sky by the towers and conductors would result in a moderate degree of view blockage.

The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant but mitigable to less than significant levels (Class II). Implementation of the tower adjustment and elimination of Tower 2/13 as required in Mitigation Measure V-5a (see Figure D.3-5c) would eliminate the significant (Class II) visual impact of the Proposed Project on Cañada Road and the existing prominent view of the 60 kV transmission line. If an adjustment of Tower 2/12 is necessary, the resulting visual impact of the new location would not be significant because the adjusted position of Tower 2/12 would still be outside of the primary cone of vision of travelers on Cañada Road. If increased tower heights are required to accomplish the span from Tower 2/12 to 2/14, the impact of the increased structure heights would be more than offset by the elimination of one entire structure. The resulting visual impact of any increased tower heights (as long as it does not exceed an additional 30% of structure height) would not be significant.

#### ***Mitigation Measure for Impact V-5***

**V-5a Eliminate Tower 2/13.** Eliminate Tower 2/13 (as illustrated in Figure D.3-5c) by spanning directly from Tower 2/12 to Tower 2/14. If necessary to accommodate this tower elimination, the location of Tower 2/12 shall be adjusted to increase the span distance (to approximately 1,450 feet). If necessary, tower heights can be increased (up to 30% additional height without creating an additional visual impact) to facilitate longer spans.

If the elimination of Tower 2/13 would create excessive tower heights (more than 30% greater than the proposed height), the tower may be relocated to an in-line position, upslope between Towers 1/12 and 2/14. It is understood that under this measure, Towers 1/12, 2/13, and 2/14 may be 131, 75, and 125 feet tall, respectively. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

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Figure D.3-5A. Existing View – Key Viewpoint 4, Cañada Road Southbound  
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Figure D.3-5B. Visual Simulation – Key Viewpoint 4, Cañada Road Southbound  
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Figure D.3-5C. Elimination of Tower 2/13

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### **Impact V-6: Key Viewpoint 5 – I-280 Southbound Vista Point**

Figure D.3-6A presents the existing view to the west-northwest from Key Viewpoint 5 at the I-280 southbound vista point. Figure D.3-6B presents a visual simulation that depicts the replacement of the existing 60 kV transmission line with the Proposed Project's Towers 3/19, 3/20, 3/21, 3/22, 4/23, and 4/24 (left to right in the simulation). The new structures would be larger by 17%, 17%, 17%, 6%, 41%, and 28% respectively. The increase in structure size would result in a slight increase in the degree of structure prominence compared to the existing transmission line which traverses the landscape in the center of the line of sight. Visual contrast of the larger vertical, complex structures would range from low-to-moderate in a landscape that is dominated by horizontal to rolling natural landforms, and is largely a result of the structures' silvery-gray color contrast with the darker green of the background vegetation. The color contrast caused by the reflection of the sun off the structures would depend on ambient lighting conditions and time of day. At this viewing distance, the structures would be subordinate in scale to the more expansive landforms. The incremental change in structure size would also cause a low degree of view blockage of higher quality background features (landforms and vegetation).

The overall visual change would be low and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). However, implementation of the structural painting recommended in Mitigation Measure V-6a would reduce the color contrast that occurs during highly reflective lighting conditions (morning bright sun). Figure D.3-6C presents a visual simulation that shows the effect of appropriate structural painting. When compared to the Proposed Project simulation presented in Figure D.3-6B, it is clear that a neutral green color can reduce structure color contrast and noticeability. Also, it should be noted that implementation of the reroute proposed in Mitigation Measure V-8a (discussed below) would also substantially reduce the visibility of Towers 3/19 through 4/24 when viewed from KVP 5.

#### ***Mitigation Measure for Impact V-6***

**V-6a Paint Towers with Appropriate Colors.** Transmission towers that are visible from sensitive viewing locations (in this case Towers 3/19 through 4/24) shall be painted appropriate colors to most effectively blend the structures with the visible background landscape. Structures that are visible from more than one sensitive viewing location may require more than one color if backdrops are substantially different when viewed from different vantage points. For example, Tower 3/21 would typically have a light colored sky background when viewed from southbound I-280 north of the structure. Therefore, the north-facing structural surfaces should be painted a neutral, non-reflecting gray color. However, Tower 3/21 is backdropped by green, vegetated landforms when viewed from the southbound I-280 vista point (as illustrated in Figure D.3-6B) and much of northbound I-280 south of the structure. Therefore, south- and east-facing structural surfaces should be painted a neutral green color to more effectively blend with the background vegetation. PG&E shall submit a tower paint plan demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

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Figure D.3-6A. Existing View – Key Viewpoint 5, Interstate 280 Southbound Vista Point  
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Figure D.3-6B. Visual Simulation – Key Viewpoint 5, Interstate 280 Southbound Vista Point  
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Figure D.3-6C. Visual Simulation – Key Viewpoint 5, Interstate 280 Southbound Vista Point  
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### **Impact V-7: Key Viewpoint 6 – Cañada Road**

Figure D.3-7A presents the existing view to the north from Key Viewpoint 6 on Cañada Road, just south of proposed Tower 3/22. Figure D.3-7B presents a visual simulation that depicts the replacement of the existing 60 kV transmission line with the Proposed Project's Tower 3/22. Tower 3/22 would replace a 129-foot tall lattice structure with a 136.5-foot tall lattice structure, representing an approximately 6% increase in structure size. The relatively small increase in the size of the structure at this location would be slightly noticeable. The additional structure height would not result in significant additional structure skylining. The slight increase in structure size would also cause a slight increase in structure prominence and industrial character. As a result, visual contrast would be low and the Proposed Project would appear co-dominant with the existing landform features. The incremental increase in structure height would cause a low degree of view blockage.

The overall visual change would be low-to-moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). Implementation of the recommended reroute contained in Mitigation Measure V-8a (discussed below) would reduce the adverse but less than significant visual impact of the proposed Tower 3/22 as well as the existing prominent 60 kV transmission line on views from northbound Cañada Road in the vicinity of Tower 3/22. The visual impact of the proposed reroute on southbound Cañada Road would be similar (Class III) to the visual impact under the Proposed Project.

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Figure D.3-7A. Existing View – Key Viewpoint 6, Cañada Road  
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Figure D.3-7B. Visual Simulation – Key Viewpoint 6, Cañada Road  
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### **Impact V-8: Key Viewpoint 7 – I-280 Southbound at SR 92**

Figure D.3-8A presents the existing view to the south from Key Viewpoint 7 on southbound I-280, at the Highway 92 overpass. Figure D.3-8B presents a visual simulation that depicts the replacement of the existing 60 kV transmission line with the proposed Towers 3/19 through 4/24 (the closest tower). Increased tower sizes would range from 17% to 41%. Tower 4/23 (visible above the crest of the hill to the right of Tower 4/24) would replace a 96.5-foot tall lattice structure with a 136.5-foot tall lattice structure, representing a 41% increase in structure size. Tower 4/24 would replace a 106.5-foot tall lattice structure with a 136.5-foot tall lattice structure, representing an approximately 28% increase in structure size which would be particularly conspicuous given Tower 4/24's highly exposed location on the ridge immediately adjacent to I-280. Additional structure height would cause additional structure skylining of all visible towers and would cause new skylining for Tower 4/23. The increased structure size would also cause increased structure prominence, particularly for Towers 4/23 and 4/24, and a visible increase in industrial character. As a result, visual contrast would be moderate-to-high and the Proposed Project would appear co-dominant with the existing landform features. The new and increased structure skylining would result in a moderate degree of view blockage.

The overall visual change would be moderate-to-high and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measure V-8a (below). It should also be noted that a similar visual impact would be experienced from northbound I-280 as travelers approach the Tower 4/24-25 span from the south.

Implementation of the recommended reroute contained in Mitigation Measure V-8a and shown in Figure D.3-8C would reduce the significant (Class II) visual impact of the Proposed Project to less than significant levels for both southbound and northbound I-280 by eliminating the majority of the structural prominence of Towers 3/19 through 4/25. The proposed reroute would also significantly reduce the visual prominence of the existing 60 kV transmission line. The reroute would bring Towers 3/19 through 3/21 down off of the ridgeline adjacent and to the west of I-280 and pull Tower 3/22 further to the west away from I-280. The reroute would increase Tower 4/23's prominence in views from I-280 slightly due to repositioning and increased height but it would eliminate the proposed Tower 4/24 position completely by accomplishing the span of I-280 from the area around the proposed Tower 4/23 location. The new span would also bring Tower 4/25 (on the east side of I-280) further south to the base of the hill visible on the left side of Figure D.3-6B, providing an improved southbound I-280 backdrop and substantially reducing its visibility to northbound I-280. As a result, the new span would be substantially less visually impacting. Also, by spanning to the west of Cañada Road between new Tower 3/21 and Tower 3/22 locations further south, view duration of Tower 3/22 would be substantially shortened for both northbound and southbound travelers on Cañada Road. Compared to the Proposed Project, the reroute would have less visual impact on northbound Cañada Road views and similar to less visual impact on southbound Cañada Road views. Even if relocation of Tower 4/25 results in a longer span to Tower 4/26 and requires that Tower 4/25 be taller (not to exceed a height increase of 30%), the reroute in Mitigation Measure V-8a would result in a less than significant visual impact.

Also, Mitigation Measure V-6a (tower painting) should be applied to the appropriate towers to more effectively blend the structures with their respective backdrops.

### ***Mitigation Measures for Impact V-8***

**V-8a Relocate Towers between 2/18 and 4/25.** Relocate the proposed route between Tower 2/18 and Tower 4/25 as shown in Figure D.3-8C. This reroute would reduce the visual prominence of the Proposed Project on views from southbound and northbound I-280 and northbound Cañada Road. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

~~Mitigation Measure V-6a should be applied to Towers 3/18 to 4/25 to more effectively blend the structures with their respective backdrops.~~

### **Ralston Substation to Carolands Substation**

Visual impacts resulting from project operation between Ralston Substation and Carolands Substation (proposed Towers 5/28 through 8/51) would be experienced from northbound and southbound I-280, northbound and southbound Cañada Road, Bunker Hill Drive, Crystal Springs Rest Area (northbound I-280), northbound and southbound Skyline Boulevard, and residential areas in Hillsborough (Lexington Avenue, Laurel Hill Drive, Seneca Lane, Berryessa Way, Lakeview Drive, Wedgewood Drive, Black Mountain Road, Hayne Road, and Darrell Road). Four key viewpoints were selected to represent the visual impacts experienced along this route segment including two viewpoints in residential areas, one viewpoint on I-280, and one viewpoint at the Crystal Springs Rest Area and Junipero Serra Landmark. The two residential viewpoints were considered representative of the type of visual impact that would be experienced by residences that either face onto the route or back onto the route. Because of Cañada Road's close proximity to I-280 and similar grade, the visual impact to I-280 was considered representative of the visual impact to Cañada Road. Also, the visual impact to Crystal Springs Road was considered minimal because of the road's position substantially below the roadway span.

Figure D.3-8A. Existing View – Key Viewpoint 7, Interstate 280 Southbound  
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Figure D.3-8B. Visual Simulation – Key Viewpoint 7, Interstate 280 Southbound  
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Figure D.3-8C. Mitigation Reroute Between Towers 2/18 and 4/26  
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## Impact V-9: Key Viewpoint 8 – Lexington Avenue

Figure D.3-9A presents the existing view to the south from Key Viewpoint 8 on the east side of Lexington Avenue, approximately 250 feet east of the proposed route. Figure D.3-9B presents a visual simulation that depicts the replacement of the existing 60 kV transmission line tower with proposed Tower 5/29. Tower 5/29 would replace an 84.5-foot tall lattice tower with a 110-foot tall lattice tower, representing an approximately 30% increase in structure size. The substantial increase in structure height would cause additional structure skylining, increased structure prominence, and a noticeable increase in industrial character. As a result, visual contrast would be moderate compared to the existing condition and the Proposed Project would appear co-dominant with the existing suburban landscape and background landform features. The increased structure skylining would result in a moderate degree of view blockage of sky.

The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity of this residential environment, the resulting visual impact would be significant (Class II). It should also be noted that a similar visual impact would be experienced by other residential areas backing onto the proposed route including Hillsborough residences along Laurel Hill Drive, Seneca Lane, Lakeview Drive, Wedgewood Drive, and Burlingame residences along Skyview Drive and Loma Vista Drive. Therefore, the impact analysis presented for Key Viewpoint 8 is considered applicable to the above referenced residential areas.

There are five towers most visible to residences on Lexington Avenue and adjacent streets: Towers 5/29 through 6/33. Mitigation Measure V-9a, illustrated in Figure D.3-9c, recommends elimination of three of those towers: Towers 5/29, 5/31, and 6/33. These towers proposed for elimination are those that are currently most visible from Lexington Avenue, so their elimination would be greatly beneficial in comparison to the Proposed Project which would replace each existing tower with a new, taller tower.

It should be noted that the elimination of three towers along this portion of the route would require longer conductor spans between the remaining towers. In some instances, the longer spans may in turn require taller towers. An increase in the height of Towers 5/28, 5/30, 5/32 and 6/34 (up to a maximum of 30%<sup>1</sup>) would be somewhat offset by the complete elimination of four towers. However, because the remaining towers would be substantially larger than those currently present and they would be in close proximity to residences, the resulting visual impact of the increased tower heights is still considered to be significant (Class I).

### ***Mitigation Measure for Impact V-9***

**V-9a Eliminate Towers 5/29, 5/31 and 6/33.** Eliminate Towers 5/29, 5/31 and 6/33 by increasing span distances between towers to reduce the number of towers between Tower 5/28 and Tower 6/34 (as shown in Figure D.3-9c). If necessary, tower heights can be increased (up to a maximum of 30% additional height) to facilitate longer spans without creating a significant visual impact. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction. If the tower eliminations cannot be accomplished as described above without exceeding the 30%

<sup>1</sup> It is considered unlikely that a 30% increase in height would actually be required to span the remaining distance between towers, but even this height increase would be preferred over the presence of the additional three towers that would exist without implementation of Mitigation Measure V-9a.

height increase limitation, then Tower 5/29 shall be eliminated, Towers 5/31 and 6/33 shall be retained, and the visibility of Towers 5/30 and 5/31 shall be reduced as illustrated in Figure D.3-9c (rev). This shall be accomplished by taking the following steps: (a) Move Tower 5/28 northward (still staying adjacent to the trees) but no further than the revised location shown in Visual Resources Figure D.3-9c (Rev); (b) Increase the height of Tower 5/28 as necessary but not exceeding the 30% height increase threshold; (c) Move Tower 5/31 slightly south as shown in Visual Resources Figure D.3-9c (Rev) to increase structural screening by the adjacent trees; and (d) Increase the height of Tower 5/31 the minimum extent necessary to facilitate the span to Tower 5/32 without exceeding the 30% height limitation. During the preparation of final construction plans, PG&E shall consult with the visual specialist to ensure that the objectives of this measure are achieved.

Figure D.3-9A. Existing View – Key Viewpoint 8, Lexington Avenue  
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Figure D.3-9B. Visual Simulation – Key Viewpoint 8, Lexington Avenue  
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Figure D.3-9C. Tower Elimination West of Lexington Avenue

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Figure D.3-9C. Tower Elimination West of Lexington Avenue (rev)

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### Impact V-10: Key Viewpoint 9 – Crystal Springs Rest Area

Figure D.3-10A presents the existing view to the south from Key Viewpoint 9 at the Crystal Springs Rest Area and Junipero Serra Monument. Figure D.3-10B presents a visual simulation that depicts the replacement of existing 60 kV transmission towers with the Proposed Project's Towers 6/36 through 7/40 (closest tower in the simulation). The new structures would be larger by 21%, 24%, 19%, 18%, and 27% respectively. The increase in structure size would result in a noticeable increase in the degree of structure prominence (particularly Tower 7/40) compared to the existing transmission line, which parallels I-280 (visible along the right side of the photograph). Structural contrast caused by the larger vertical, complex structures would be moderate and the project would appear co-dominant with the existing landforms. The incremental change in structure size would also cause a moderate degree of view blockage of higher quality background features (landforms, vegetation, and sky).

The overall visual change would be moderate and in the context of the existing landscape's high visual sensitivity, the resulting visual impact would be significant but mitigable to less than significant levels (Class II) with implementation of Mitigation Measure V-10a. The elimination of Tower 7/40 as required in Mitigation Measure V-10a and illustrated in Figure D.3-10c, would substantially offset the proposed incremental increase in tower heights along this portion of the route, thereby reducing the visual impact to a level that would be less than significant. If increased tower heights (not to exceed 30% additional height) are required to accomplish the span from Tower 7/39 to 7/41, the increased heights of the two structures would be more than offset by the elimination of one entire structure and the resulting visual impact would be less than significant.

#### ***Mitigation Measure for Impact V-10***

**V-10a Eliminate Tower 7/40.** Eliminate Tower 7/40 by spanning directly from Tower 7/39 to Tower 7/41 as shown in Figure D.3-10c. If necessary, the location of Tower 7/39 can be adjusted and the heights of Towers 7/39 and 7/41 can be increased (not to exceed 30%). If necessary, tower heights can be increased (up to 30% additional height) to facilitate a longer span.

If the elimination of Tower 7/40 cannot be accomplished as described above without exceeding the 30% height limitation, then the following steps are to be taken to enable the elimination of Tower 7/40, the visual impact would be significant: (a) Move Tower 7/39 north as shown in Visual Resources Figure D.3-10c (Rev); (b) Increase the height of Tower 7/39 the minimum amount necessary not to exceed an additional 30%; (c) Move Tower 7/41 to the south as shown in Visual Resources Figure D.3-10c (Rev); (d) If necessary to further reduce the height of Tower 7/41, increase the height of Tower 7/43 (Tower 7/42 will also be eliminated); and (e) If necessary to further reduce the height of Tower 7/41, shift Tower 7/43 to the south to reduce the span distance between Towers 7/43 and 7/41. Also, if necessary to facilitate the relocation of Tower 7/39 to the north, the height of Tower 6/38 can be increased a maximum of 10%. During the preparation of final construction plans, PG&E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

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Figure D.3-10A. Existing View – Key Viewpoint 9, Crystal Springs Rest Area  
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Figure D.3-10B. Visual Simulation – Key Viewpoint 9, Crystal Springs Rest Area  
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Figure D.3-10C. Tower Elimination at Crystal Springs Rest Area

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Figure D.3-10C. Tower Elimination at Crystal Springs Rest Area (rev)

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### **Impact V-11: Key Viewpoint 10 – Interstate 280 Southbound**

Figure D.3-11A presents the existing view to the south from Key Viewpoint 10 on the southbound I-280, north of the Junipero Serra Monument (visible in the trees in the left side of the photographs). Figure D.3-11B presents a visual simulation that depicts the replacement of the existing 60 kV transmission line towers with the Proposed Project's Towers 6/36 through 7/41 (right to left in the simulation). The new structures would be larger by 21%, 24%, 19%, 18%, 27%, and 12% respectively. From southbound I-280, the increased structure sizes would cause a slight increase in perceptible structure prominence. The resulting visual contrast would be low-to-moderate and the Proposed Project would appear subordinate-to-co-dominant with the existing landscape features. When viewed from I-280, the slightly noticeable increase in structure skylining and additional obstruction of the background landforms and sky by structures would result in a low-to-moderate degree of view blockage.

The overall visual change would be low-to-moderate and in the context of the existing landscape's high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). Elimination of Tower 7/40 as required in Mitigation Measure V-10a (see above) would further reduce the visual impact on KVP 10 and southbound I-280.

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Figure D.3-11A. Existing View – Key Viewpoint 10, Interstate 280 Southbound  
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Figure D.3-11B. Visual Simulation – Key Viewpoint 10, Interstate 280 Southbound  
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## Impact V-12: Key Viewpoint 11 – Black Mountain Road

Figure D.3-12A presents the existing view to the south from Key Viewpoint 11 on Black Mountain Road, south of Hayne Road and immediately south of Tower 8/46. Figure D.3-12B presents a visual simulation that depicts the replacement of the existing lattice steel pole 60 kV transmission towers with the Proposed Project's tubular steel pole Towers 7/44 and 7/45 (closest tower). The new structures would be larger by 17% and 25% respectively. The benefit of the simpler structure of the proposed tubular steel poles would be more than offset by the larger size of the structures. The increase in structure size would result in a noticeable increase in the degree of structure prominence (particularly Tower 8/46) compared to the existing transmission line which parallels Black Mountain Road along this portion of the route. Although there are similar existing structural features in the form of the existing transmission line and the existing wood pole line on the east side of Black Mountain Road, structural contrast caused by the larger vertical, complex structures would be moderate in the predominantly natural-appearing landscape that characterizes the west side of Black Mountain Road in this area. The project would appear co-dominant with the existing landforms and the incremental change in structure size would cause a moderate degree of view blockage of higher quality background features (vegetation and sky).

The overall visual change would be moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant (Class I). The elimination of Towers 7/42, 7/45, and 8/47 as required in Mitigation Measure V-12a and illustrated in Figure D.3-12c would substantially offset the proposed incremental increase in tower heights along this portion of the route, thereby reducing the visual impacts along Black Mountain Road and Wedgewood Drive. However, the elimination of three towers along this portion of the route would require longer conductor spans (of about 1,250 feet), which may in turn require taller towers. Due to the height and bulk of the remaining towers, the visual impact, though reduced, would remain significant.

### **Mitigation Measure for Impact V-12**

**V-12a Eliminate Towers 7/42, 7/45, and 8/47.** Eliminate Towers 7/42, 7/45, and 8/47 by increasing span distances between proposed Towers 7/41 and 8/48. If necessary, modify the location of Towers 7/41, 7/43, 7/44, and 8/48 (as shown in Figure D.3-12c) to reduce the number of towers between Towers 7/41 and 8/48 from eight to five. If necessary, tower heights can be increased (up to a maximum of 30% additional height) to facilitate longer spans. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction. If the elimination of Towers 7/42, 7/45, and 8/47 cannot be accomplished as described above without exceeding the 30% height limitation, then the following steps are to be taken, as illustrated in Figure D.3-12c (Rev): (a) Increase the height of Tower 7/43 slightly to offset the tower's shift in location to the south as described in Mitigation Measure V-10a; (b) Increase the height of Tower 7/44 to enable the reduction in height of Tower 7/46 (and to further facilitate the slight relocation of Tower 7/43 to the south as described in Mitigation Measure V-10a); and (c) If necessary, increase the height of Tower 8/48 to further reduce the height of Tower 7/46. During the preparation of final construction plans, PG&E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

### **Impact V-13: Carolands Substation to Transition Station**

Visual impacts resulting from project operation between Carolands Substation and the Transition Station (proposed Towers 8/52 through 14/95) would be experienced from northbound and southbound I-280, northbound and southbound Skyline Boulevard, Crystal Springs Golf Course, Sky View Drive, Loma Vista Drive, Sawyer Camp Trail, San Andreas Trail, Sweeney Ridge in the Golden Gate National Recreation Area, and San Bruno Avenue. Seven key viewpoints were selected to represent the visual impacts experienced along this route segment including one viewpoint on I-280, one viewpoint at the Crystal Springs Golf Course, one viewpoint on the Sawyer Camp Trail, one viewpoint on the San Andreas Trail, one viewpoint on Sweeney Ridge, one viewpoint on Skyline Boulevard, and one viewpoint on San Bruno Avenue.

The elimination of Towers 10/64 and 10/66 as required in Mitigation Measure V-13a, and illustrated in Figure D.3-12d, would substantially offset the proposed incremental increase in tower heights along this portion of the route. However, this would likely require that the remaining towers would be taller. Therefore, while there would be fewer towers after implementation of mitigation, the residential areas along Sky View Drive and Loma Vista Drive would experience significant (Class I) visual impacts similar to those along Lexington Avenue (see Key Viewpoint 8 discussion above).

#### ***Mitigation Measure for Impact V-13***

**V-13a Eliminate Towers 10/64 and 10/66.** Eliminate Towers 10/64 and 10/66 by increasing span distances between proposed Towers 10/63 and 10/67 (as shown in Figure D.3-12d). If necessary, modify the location and heights (not to exceed 30%) of Towers 10/63, 10/65, and 10/67 to reduce the number of towers between Towers 10/63 and 10/67 from five to three. If necessary, tower heights can be increased (up to 30% additional height) to facilitate longer spans (of about 1,100 to 1,400 feet). ~~PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction. If the elimination of Towers 10/64 and 10/66 cannot be accomplished as described above without exceeding the 30% height limitation, then the following steps are to be taken to enable the elimination of Towers 10/64 and 10/66, as illustrated in Figure D.3-12d (Rev): (a) Increase the height of Tower 10/63 (not to exceed the 30% threshold) to enable a reduction in the height of Tower 10/65; (b) If necessary, shift the location of Tower 10/67 to the south as shown on Figure D.3-12d (Rev) in order to reduce the height of Tower 10/65; and (c) If necessary, a 35% increase in height of Tower 10/67 (5% over the 30% threshold) would be acceptable to meet the objectives of this measure. During the preparation of final construction plans, PG&E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.~~

Figure D.3-12A. Existing View – Key Viewpoint 11, Black Mountain Road  
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Figure D.3-12B. Visual Simulation – Key Viewpoint 11, Black Mountain Road  
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Figure D.3-12C. Tower Elimination West of Black Mountain Road  
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Figure D.3-12C. Tower Elimination West of Black Mountain Road (rev)

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Figure D.3-12D. Tower Elimination West of Skyline Boulevard

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Figure D.3-12D. Tower Elimination West of Skyline Boulevard (rev)

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### Impact V-14: Key Viewpoint 12 – Crystal Springs Golf Course

Figure D.3-13A presents the existing view to the northwest from Key Viewpoint 12 in the Crystal Springs Golf Course Parking Lot, immediately adjacent and to the northwest of the clubhouse. Figure D.3-13B presents a visual simulation that depicts the replacement of the existing lattice steel pole 60 kV transmission towers with the Proposed Project's tubular steel pole Towers 9/56 through 9/59 (right to left in the simulation). The new structures would be larger by 22%, 26%, 22%, and 11% respectively. The benefit of the simpler structure of the proposed tubular steel poles would be more than offset by the larger size of the structures. The increase in structure size would result in a noticeable increase in the degree of structure prominence compared to the existing transmission line which parallels the fairways along this portion of the route. Visual contrast caused by the larger vertical structures would be moderate in the predominantly natural-appearing landscape along this portion of the proposed route. The project would appear co-dominant with the existing land and vegetative forms and the incremental change in structure size would cause a moderate degree of view blockage of sky.

The overall visual change would be moderate and in the context of the existing landscape's high visual sensitivity, the resulting visual impact would be significant but mitigable to less than significant levels (Class II). Elimination of Towers 9/56, 9/58, and 9/60 (beyond the view presented in Figure D.3-13B) as recommended in Mitigation Measure V-14a and illustrated in Figure D.3-13c would reduce the visual impacts to Crystal Springs Golf Course to levels that would be less than significant. It should be noted that the elimination of three towers along this portion of the route would require longer conductor spans (from about 900 to 1,200 feet in length). In some instances, the longer spans may in turn require taller towers. However, any increase (not to exceed 30%) in the height of structures 9/55, 9/57, 9/59 and 9/61 would be more than offset by the complete elimination of three towers. Therefore, the resulting visual impact of any increased tower heights would not be significant. Also, application of Mitigation Measure V-6a (appropriate structural painting) to all of the towers within Crystal Springs Golf Course to blend the towers more effectively with the vegetative and sky background would further reduce the degree of visual impact.

#### ***Mitigation Measure for Impact V-14***

**V-14a Eliminate Towers 9/56, 9/58 and 9/60.** Eliminate Towers 9/56, 9/58, and 9/60 by increasing span distances between proposed Towers 9/55 and 9/61, as shown in Figure D.3-13c. If necessary, modify the location and heights (not to exceed 30%) of Towers 9/55, 9/57, 9/59, and 9/61 to increase conductor spans, thereby reducing the number of towers between Towers 9/55 and 9/61 from seven to four. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction. If the elimination of Towers 9/56, 9/58 and 9/60 cannot be accomplished as described above without exceeding the 30% height limitation, then the following steps are to be taken to enable the elimination of Towers 9/56, 9/58 and 9/60 as illustrated in Figure D.3-13c (Rev): (a) Increase the height of Tower 9/59 to enable a reduction in the height of Tower 9/57, and (b) If necessary, increase the height of Tower 9/55 to enable the reduction in height of Tower 9/57. During the preparation of final construction plans, PG&E shall consult with the visual specialist to ensure that the objectives of this measure are achieved.

Also, Mitigation Measure V-6a should be applied to all towers within Crystal Springs Golf Course to more effectively blend the structures with their respective backdrops.

~~If the elimination of Towers 9/56, 9/58, and 9/60 cannot be accomplished, the visual impact would be significant.~~

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Figure D.3-13A. Existing View – Key Viewpoint 12, Crystal Springs Golf Course  
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Figure D.3-13B. Visual Simulation – Key Viewpoint 12, Crystal Springs Golf Course  
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Figure D.3-13C. Tower Elimination at Crystal Springs Golf Course  
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### Impact V-15: Key Viewpoint 13 – I-280 Northbound

Figure D.3-14A presents the existing view to the northwest from Key Viewpoint 13 on northbound I-280, just south of the Tower 10/68-69 span. Figure D.3-14B presents a visual simulation that depicts the replacement of the existing 60 kV transmission line tower with proposed Tower 10/69. Tower 10/69 would replace a 99-foot tall lattice structure with a 135.5-foot tall lattice structure, representing a 37% increase in structure size, which would be particularly conspicuous given Tower 10/69's highly exposed location on the ridge immediately adjacent to the west side of I-280. Additional structure height would cause additional structure skylining and prominence and a visible increase in industrial character. As a result, visual contrast would be moderate-to-high and the Proposed Project would appear co-dominant with the existing landform and vegetative features. The increased structure skylining would result in a moderate-to-high degree of view blockage. The overall visual change would be moderate-to-high and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant but mitigable to less than significant levels (Class II).

Implementation of the reroute recommended in Draft EIR ~~reroute contained in~~ Mitigation Measure V-15a, illustrated in Figure D.3-14c, would eliminate the significant (Class II) visual impact of the proposed Tower 10/68-69 span on northbound I-280 by shifting the span slightly north to achieve effective screening of Tower 10/69. As shown in Figure D.3-14c, the reroute would add an additional tower north of Tower 10/68 and from there spanning I-280 to a new Tower 10/69 location near the proposed Tower 11/70 location. The consolidation of the Tower 10/69 and 11/70 locations would offset the new tower north of Tower 10/68. There would be no net increase in the number of towers, and the significant visual impact of proposed Tower 10/69 would be eliminated. As a result, the reroute in Mitigation Measure V-15a would result in a less than significant visual impact overall. However, a comment on the Draft EIR pointed out that this mitigation measure would require that PG&E obtain an easement across a parcel of residential private property (very near the residence) in order that the lines between Towers 10/68 and 10/69 could cross that parcel. Given that Tower 10/68 cannot be moved further north to allow implementation of this route without crossing the residential property (the tower is located at the edge of the Caltrans I-280 ROW), the remaining available mitigation that would reduce the high visibility of Tower 10/69 is implementation of the reroute defined for the Partial Underground Alternative in which this area west of Burlingame residences would be avoided entirely. This reroute is recommended in Mitigation Measure V-15a. Given that the route recommended in Mitigation Measure V-15a in the Draft EIR is not feasible, Figure D.3-14c is no longer applicable. The reroute recommended in revised Mitigation Measure V-15a is shown in Figure Ap.1-3b in Appendix 1.

Mitigation Measures V-15b and V-6a would also improve the compatibility of Tower 10/69 with its surrounding vegetative forms by simplifying structural complexity and reducing structural contrast. Mitigation Measure V-15b calls for the replacement of the proposed lattice steel structures between Towers 10/69 and 14/95 with tubular steel poles. Mitigation Measure V-6a, which applies to all poles between Towers 10/69 and 14/95, would reduce visual contrast by painting the structures to better blend with the background landscape.

#### **Mitigation Measures for Impact V-15**

**V-15a** ~~Reduce Views of Proposed Tower 10/69~~Relocate the proposed Tower 10/68 to 69. If the Proposed Project is approved, Towers 10/63 to 11/70 shall be relocated to the west of the I-280 Freeway as illustrated in Figure Ap.1-3b (Partial Underground Alternative, Detail of West of I-280 Segment). Relocate the proposed Tower 10/68-69 span to the north as shown in Figure D.3-14C. This reroute would eliminate the visual prominence of Tower 10/69 on views from northbound I-280. PG&E shall submit final construction plans demonstrating compliance with

~~this measure to the CPUC for review and approval at least 60 days prior to the start of construction. If the reroute cannot be accomplished, the visual impact would be significant.~~

**V-15b Use Steel Poles from Tower 10/69 to 14/95.** PG&E shall use tubular steel poles rather than the proposed lattice steel structures from Tower 10/69 to Tower 14/95. This measure would simplify structural appearance, enable the structures to better blend in with adjacent trees and landscape, and reduce structural contrast. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

Also, Mitigation Measure V-6a (requiring appropriate tower painting) must be applied to Towers 10/69 through 14/95, thereby reducing structure visual contrast with landscape backgrounds.

Figure D.3-14A. Existing View – Key Viewpoint 13, Interstate 280 Northbound  
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Figure D.3-14B. Visual Simulation – Key Viewpoint 13, Interstate 280 Northbound  
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Figure D.3-14C. Mitigation Reroute for Towers 10/68 and 10/69

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## Impact V-16: Key Viewpoint 14 – Sawyer Camp Trail

Figure D.3-15A presents the existing view to the north from Key Viewpoint 14 on the Sawyer Camp Trail at the San Andreas Lake Dam. Figure D.3-15B presents a visual simulation that depicts the replacement of the existing 60 kV transmission towers with the Proposed Project's Towers 11/73 through 11/75 (right to left in the simulation). Towers 11/73 and 11/75 would be larger by approximately 35% and 39% respectively, while Tower 11/74 would be smaller in size by approximately 10%. The visual benefit of Tower 11/74's size reduction would be more than offset by the adverse visual result of the substantial increase in size for Towers 11/73 and 11/75. The increase in structure size would result in new skylining at the Tower 11/73 location and increased skylining at the Tower 11/75 location. The increased structure size would also cause a noticeable increase in the degree of structure prominence, particularly at the Tower 11/73 location because of the new skylining that would occur. As a result, structural contrast caused by the larger vertical, complex structures would be moderate-to-high and the project would appear co-dominant with the existing land and vegetative forms. The incremental change in structure size would also cause a moderate-to-high degree of view blockage of higher quality background features (vegetation and sky).

The overall visual change would be moderate-to-high and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant but mitigable to less than significant levels (Class II). The reroute recommended in Mitigation Measure V-16a (and shown in Figure D.3-15C) would reduce the visual impact to a level that would be less than significant. As shown in Figure D.3-15C, Tower 11/75 would be moved further to the east, behind the trees along the ridge shown in Figure D.3-15B. By spanning from proposed Tower 11/74 to the revised Tower 11/75 location, the visibility and prominence of Tower 11/75 would be substantially reduced, which, along with the Tower 11/74 size reduction, would offset the substantial increase in size at Tower 11/73. However, moving Tower 11/75 to the east, adjacent to the access trail, would increase its visibility along that portion of the trail. To offset this visibility, Tower 12/76 would be eliminated and the revised Tower 11/75 would span directly to the proposed Tower 12/77. If increased tower heights (not to exceed an additional 30% of structure height) are required to accomplish the span from Tower 11/75 to 12/77, the increased heights of Towers 11/75 and 12/77 would be more than offset by the elimination of an entire structure. The resulting visual impact of any increased tower heights would not be significant. Also, application of Mitigation Measures V-15b (use of tubular steel poles) and V-6a (appropriate structural painting) to all tower locations along the Sawyer Camp Trail will better blend the towers with the existing landscape, further reducing the degree of visual impact.

### **Mitigation Measure for Impact V-16**

**V-16a Relocate Tower 11/75 Away from Sawyer Camp Trail.** Relocate proposed Tower 11/75 to the east as shown in Figure D.3-15C. This reroute would eliminate the visual prominence of Tower 11/75 on views from the Sawyer Camp Trail at San Andreas Lake Dam. As part of this reroute, also eliminate Tower 12/76 by spanning from the revised Tower 11/75 location directly to Tower 12/77. If necessary, the height of Towers 11/75 and 12/77 can be increased (up to 30% additional height) to facilitate the longer conductor span. ~~PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.~~

If the reroute cannot be accomplished as described above without exceeding the 30% height increase limitation, the reroute can be modified as follows and as illustrated in Figure D.3-15c (Rev): (a) Tower 11/74 is to be moved to the east side of the current 60 kV Tower location rather than the west side as presently proposed (the purpose of this move is to reposition the tower to a slightly less prominent position when viewed from the San Andreas Lake Dam); (b) Tower 11/75 is to be relocated to a position south of the presently proposed location shown in Visual Resources

Figure D.3-15C (the purpose of this move is to shorten the span distance between Towers 11/74 and 11/75 in order to enable a reduction in height of Tower 11/74); and (c) Retain Tower 11/76 in order to eliminate the height increase for Tower 12/77. During the preparation of final construction plans, PG&E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

~~If the reroute and elimination of Towers 11/75 and 12/76 (respectively) cannot be accomplished, the visual impact would be significant.~~

Also, Mitigation Measure V-15b (requiring the use of tubular steel poles) must be applied to Towers 10/69 through 14/95, thereby reducing structure complexity and industrial character. Further, Mitigation Measure V-6a (requiring appropriate tower painting) must be applied to Towers 10/69 through 14/95, thereby reducing structure visual contrast with landscape backgrounds.

Figure D.3-15A. Existing View – Key Viewpoint 14, Sawyer Camp Trail  
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Figure D.3-15B. Visual Simulation – Key Viewpoint 14, Sawyer Camp Trail  
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Figure D.3-15C. Mitigation Tower Adjustments, Towers 11/74 to 12/77  
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Figure D.3-15C. Mitigation Tower Adjustments, Towers 11/74 to 12/77 (rev)

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### Impact V-17: Key Viewpoint 15 – San Andreas Trail

Figure D.3-16A presents the existing view to the northwest from Key Viewpoint 15 on the San Andreas Trail, located just south of the proposed Tower 13/84 location. Figure D.3-16B presents a visual simulation that depicts the replacement of the existing 60 kV transmission tower with the Proposed Project's Tower 13/84. Tower 13/84 would replace the existing 88-foot tall lattice tower with a 120-foot tubular steel pole structure, representing an approximately 36% increase in structure size. The benefit of the simpler structure of the proposed tubular steel pole would be more than offset by the larger size of the structure. The increased structure size would cause a noticeable increase in structure skylining and prominence. As a result, visual contrast caused by the larger vertical structures would be moderate-to-high and the project would appear co-dominant to dominant with the existing land, water, and vegetative forms, partially due to its central position in the primary cone of vision as northbound trail users are provided their first open view of the lake. The incremental change in structure size would also cause a moderate-to-high degree of view blockage of higher quality background features (land and sky).

The overall visual change would be moderate-to-high and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant but mitigable to less than significant levels (Class II). The tower relocation recommended in Mitigation Measure V-17a (and shown in Figure D.3-16C) would reduce the visibility, prominence, and view blockage of both the proposed Tower 13/84 and the existing 60 kV transmission line, reducing the visual impact to a less than significant level. As shown in Figure D.3-16C, Tower 13/84 would be moved further to the south, out of the open lake view shown in Figure D.3-16B. The revised Tower 13/84 would then require a longer span distance to proposed Tower 13/85. If necessary, Tower 13/85 could be moved further to the south to shorten the span distance as long as it does not enter the view shown in Figure D.3-15B. Mitigation Measure V-17b would further reduce the visual impact of the Proposed Project on the San Andreas Trail by removing proposed Towers 12/80 and 12/82 and spanning directly from 12/79 to 12/81 and 12/81 to 13/83. If increased tower heights (not to exceed an additional 30% of structure height) are required to facilitate longer conductor spans, the visual impact of the increased tower heights would be more than offset by the relocation of Tower 84 and the elimination of Towers 12/80 and 12/82. Therefore, the resulting visual impact of any increased tower heights would not be significant. Also, application of Mitigation Measures V-15b (use of tubular steel poles) and V-6a (appropriate structural painting) to all tower locations along the San Andreas Trail will better blend the towers with the existing landscape, further reducing the degree of visual impact.

#### **Mitigation Measures for Impact V-17**

**V-17a Relocate Tower 13/84.** Relocate proposed Tower 13/84 to the south as shown in Figure D.3-16C. This reroute would eliminate the visual prominence of Tower 13/84 on northbound views of San Andreas Lake from the San Andreas Trail. If necessary, tower heights can be increased (up to 30% additional height) to facilitate longer conductor spans and the relocation of Tower 84. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

**V-17b Eliminate Proposed Towers 12/80 and 12/82.** Eliminate proposed Towers 12/80 and 12/82 and span directly from Towers 12/79 to 12/81 and 12/81 to 13/83, as shown in Figure D.3-16c. This measure would further reduce the visual impact of the Proposed Project on the San Andreas Trail. If necessary, tower heights can be increased (up to 30% additional height) to facilitate longer conductor spans. ~~PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.~~

If the relocation of Tower 13/84 cannot be accomplished, the visual impact would be significant. If the elimination of Towers 12/80 and 12/82 cannot be accomplished as described above without exceeding the 30% height increase limitation, the measure can be modified as follows and as illustrated in Figure D.3-16c (Rev): (a) Retain Tower 12/80, thereby eliminating the need to increase the height of Tower 12/79 and reducing the height increase of Tower 12/81; and (b) If necessary, increase the height of Tower 13/83 to facilitate the reduction in heights of both Towers 12/81 and 13/84. PG&E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

Also, Mitigation Measure V-15b (requiring the use of tubular steel poles) must be applied to Towers 10/69 through 14/95, thereby reducing structure complexity and industrial character. Further, Mitigation Measure V-6a (requiring appropriate tower painting) must be applied to Towers 10/69 through 14/95, thereby reducing structure visual contrast with landscape backgrounds.

Figure D.3-16A. Existing View – Key Viewpoint 15, San Andreas Trail  
*For security reasons this figure is not included in the online version of the report.*



Figure D.3-16B. Visual Simulation – Key Viewpoint 15, San Andreas Trail  
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Figure D.3-16C. Mitigation Tower Adjustment Between Towers 12/79 and 13/85  
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Figure D.3-16C. Mitigation Tower Adjustment Between Towers 12/79 and 13/85 (rev)  
*For security reasons this figure is not included in the online version of the report.*



### **Impact V-18: Key Viewpoint 16 – Sweeney Ridge / Bay Discovery Site**

Figure D.3-17A presents the existing view to the east from Key Viewpoint 16 on Sweeney Ridge, adjacent to the Bay Discovery Site. Figure D.3-17B presents a visual simulation that depicts the replacement of existing 60 kV transmission tower with the Proposed Project's Towers 13/83 through 14/91 (right to left). The Proposed Project would replace the existing lattice structures with a mix of lattice and tubular steel pole structures. One of the proposed structures would be 4% smaller than the existing tower while the remainder of the proposed towers would be from 11% to 54% larger in size. The increased structure size would cause a noticeable increase in structure prominence. However, at this viewing distance, visual contrast caused by the larger vertical structures would be low-to-moderate and the project would appear subordinate to the existing land, water, and vegetative forms, and built features. The incremental change in structure size would cause a low-to-moderate degree of view blockage of higher quality background features (vegetation).

The overall visual change would be low-to-moderate and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be adverse but less than significant (Class III). However, the structural painting requirement contained in Mitigation Measure V-6a would lessen the prominence of the Proposed Project and reduce the visual impact of the Proposed Project. Also Mitigation Measure V-19a (see below under Impact V-19) would reduce the number of structures between Towers 13/83 and 14/91 from the proposed nine towers to seven towers, offsetting the impact of the proposed increased structure size.

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Figure D.3-17A. Existing View – Key Viewpoint 16, Sweeney Ridge  
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Figure D.3-17B. Visual Simulation – Key Viewpoint 16, Sweeney Ridge  
*For security reasons this figure is not included in the online version of the report.*



### Impact V-19: Key Viewpoint 17 – Skyline Boulevard Northbound

Figure D.3-18A presents the existing view to the north from Key Viewpoint 17 on northbound Skyline Boulevard, just south of Tower 14/90. Figure D.3-18B presents a visual simulation that depicts the replacement of the existing lattice steel pole 60 kV transmission towers with the Proposed Project's tubular steel pole Towers 14/90, 14/91, 14/92, 14/93, and 14/94 (left to right in the simulation). The new structures would be larger by 43%, 54%, 54%, 34%, and 66% respectively. The substantial increase in structure size would result in a significant increase in structural prominence and industrial character. Visual contrast caused by the larger vertical structures would be moderate-to-high and the project would appear co-dominant-to-dominant with the existing land and vegetative forms and the linear form of Skyline Boulevard. The incremental change in structure size would also cause a moderate-to-high degree of view blockage of sky and land and vegetative forms.

The overall visual change would be moderate-to-high and in the context of the existing landscape's moderate-to-high visual sensitivity, the resulting visual impact would be significant but mitigable to less than significant levels (Class II). Elimination of Towers 13/89, 14/91, 14/92, and 14/94, as recommended in Mitigation Measure V-19a and illustrated in Figure D.3-18C, would reduce the visual impacts to Skyline Boulevard and the San Andreas Trail to levels that would be less than significant. It should be noted that the elimination of four towers along this portion of the route would require longer conductor spans. In some instances, the longer spans may in turn require taller towers. However, any increase (not to exceed 30%) in the height of Towers 13/88, 14/90, 14/93, and 14/95 would be more than offset by the complete elimination of four towers. Therefore, the resulting visual impact of any increased tower heights would not be significant.

Also, application of Mitigation Measure V-15b (use of tubular steel poles) and Mitigation Measure V-6a (appropriate structural painting) to all of the towers along Skyline Boulevard to simplify structural appearance and better blend the towers with the vegetative and sky background would further reduce the degree of visual impact.

#### ***Mitigation Measure for Impact V-19***

**V-19a Eliminate Towers 13/89, 14/91, 14/92, and 14/94.** Eliminate Towers 13/89, 14/91, 14/92, and 14/94 by increasing span distances between proposed Towers 13/88 and 14/95. If necessary, modify the location and height of Towers 13/88, 14/90, 14/93, and 14/95 (as shown in Figure D.3-18D) to facilitate longer spans. Tower heights can be increased (up to 30% additional height) to facilitate longer spans. ~~PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.~~

~~If the elimination of Towers 13/89, 14/91, 14/92, and 14/94 cannot be accomplished, the visual impact would be significant. If the elimination of Towers 13/89, 14/91, 14/92, and 14/94 cannot be accomplished as described above without exceeding the 30% height increase limitation, the measure shall be modified as follows and as illustrated in Figure D.3-18d (Rev): (a) Retain Tower 14/92, thereby substantially reducing the necessary height increases of Towers 14/90 and 14/93; and (b) Re-position Tower 14/92 to even the span distances between Towers 14/90 and 14/93 and to reduce the necessary height increases of Towers 14/90 and 14/93. PG&E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.~~

Also, Mitigation Measure V-15b (requiring the use of tubular steel poles) must be applied to Towers 10/69 through 14/95, thereby reducing structure complexity and industrial character. Further, Mitigation Measure V-6a (requiring appropriate tower painting) must be applied to Towers 10/69 through 14/95, thereby reducing structure visual contrast with landscape backgrounds.

Figure D.3-18A. Existing View – Key Viewpoint 17, Skyline Boulevard Northbound  
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Figure D.3-18B. Visual Simulation – Key Viewpoint 17, Skyline Boulevard Northbound  
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Figure D.3-18C. Visual Simulation – Key Viewpoint 17, Skyline Boulevard Northbound  
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Figure D.3-18D. Mitigation Tower Adjustments along Skyline Boulevard  
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Figure D.3-18D. Mitigation Tower Adjustments along Skyline Boulevard (rev)  
*For security reasons this figure is not included in the online version of the report.*



### D.3.3.4 Transition Station

#### Impact V-20: Key Viewpoint 18 – Transition Station / San Bruno Avenue

Figure D.3-19A presents the existing view to the northwest from Key Viewpoint 18 on the south side of San Bruno Avenue, adjacent to the Sky Crest Center. Figure D.3-19B presents a visual simulation that depicts the placement of the transition station on the vacant parcel located at the northwest corner of San Bruno Avenue and Glenview Drive. The Proposed Project would result in the introduction of a structurally prominent and complex industrial facility consisting of a 47-foot tall by 36-foot wide dead-end structure, support structure for cable terminations and surge arrestors, a 10-foot by 10-foot by 13-foot control building, all surrounded by an 8-foot tall masonry wall. Visual contrast caused by the facilities would be moderate-to-high and the project would appear co-dominant with other landscape features including the Sky Crest Center and background hills. The new facilities would result in a moderate-to-high degree of view blockage of sky and background land and vegetative forms.

The overall visual change would be moderate-to-high and in the context of the existing landscape's moderate visual sensitivity, the resulting visual impact would be significant (Class I).

PG&E has proposed landscaping for the transition station; however no detail other than a conceptual plan has been provided. Therefore, Mitigation Measure V-20a is recommended to ensure that landscaping would reduce impacts to the maximum extent possible. This measure applies to the proposed transition station, if adopted, or to any transition station alternative. Furthermore, for the proposed transition station, the Sneath Lane Transition Station Alternative, or the West of Skyline Transition Station Alternative, a design evaluation is required under Mitigation Measure V-20b to determine whether or not a transition tower might be less visually impacting than a transition station. However, the visual impact of the proposed transition station (or tower) would remain significant even with landscaping, as long as the station remains at the proposed location. Note that this impact would be eliminated with implementation of the West of Skyline Transition Station Alternative, or the Sneath Lane Transition Station Alternative, or the Glenview Drive Transition Tower Alternative (see Sections D.3.5.1, ~~and~~ D.3.5.2, and D.3.5.3).

#### **Mitigation Measures for Impact V-20**

**V-20a Transition Station Landscaping.** At least 60 days prior to construction of the transition station, PG&E shall provide to the CPUC for review and approval a detailed plan for landscaping the transition station or structures. The plan shall be prepared by a landscape architect and shall be reviewed by a botanist providing input on appropriate planting in sensitive habitats and measures to minimize disturbance of sensitive habitats. Vegetation species are to be determined in consultation with the botanist and the appropriate local planning agency. Screening vegetation of sufficient density and height shall be planted to fully screen from view within five years of completion of construction, the lower portions of the transition station including fences, ~~and~~ walls, control building, and all electrical equipment including cable terminations, surge arrestors, and the lower 20 feet of the H-frame dead end structure or tower (for those locations that utilize a transition tower rather than a transition station). ~~within five years of completion of construction. The vegetation plan shall include simulations or drawings of the station or structures after 5 years and after 10 years.~~ Plantings must be strategically placed in order to achieve effective screening of specific views for each transition facility location as follows:

- San Bruno Avenue: Views from San Bruno Avenue, Skyline Boulevard, Sky Crest Shopping Center, and Glenview Drive.
- West of Skyline: Views from Skyline Boulevard, and the San Andreas Trail.

- Sneath Lane: Views from Skyline Boulevard and Sneath Lane.
- PG&E Option 1B Alternative, Overhead Crossing of Crystal Springs Dam, Southern: Views from Skyline Boulevard and I-280,
- PG&E Option 1B Alternative, Overhead Crossing of Crystal Springs Dam, Northern: Views from Skyline Boulevard, Crystal Springs Road, and I-280.
- PG&E Option 1B Alternative, Modified Overhead Crossing of Crystal Springs Dam: Views from Crystal Springs Road.
- Partial Underground Alternative, Ralston Substation: Views from I-280 and Residences along Allegheny Way.
- Partial Underground Alternative, Transition Station Near Tower 6/36: Views from I-280, Skyline Boulevard, and Residences along Laurel Hill Drive.
- Partial Underground Alternative, Transition Tower Near Tower 7/39: Views from I-280, Skyline Boulevard, and Residences along Lakeview Drive.
- Partial Underground Alternative, Transition Tower at Tower 8/50: Views from I-280, Skyline Boulevard, and Residences along Darrell Road.
- Glenview Drive Alternative Transition Tower: Views from Glenview Drive and the residences immediately north of the site.
- Trousdale Drive Alternative Transition Towers: Views from adjacent watershed access roads.
- Golf Course Drive Transition Station Alternative: Priority shall be given to protection of views from I-280, the I-280 Hayne Road off-ramp, Skyline Boulevard, and Golf Course Drive. If this alternative is approved, at least 120 days prior to construction of the transition station, PG&E shall provide to the CPUC for review and approval a detailed Screening Plan for the Golf Course Drive Transition Station. The plan must include the retention of all existing trees that presently border the site, as well as additional strategic plantings to fill in gaps and view corridors between existing trees, as well as strategic plantings in new areas including; (a) along the west side of southbound I-280 in the immediate vicinity of the site, (b) along the west side of the I-280 southbound Hayne Road off-ramp, and (c) along the east side of Golf Course Drive extending from the entry gate far enough north to intercept all sightlines of southbound motorists on Golf Course Drive. The Screening Plan shall incorporate field guidance from the visual specialist to ensure that the Plan achieves the objectives contained in this measure.

The vegetation plan for each station or structure shall include simulations or drawings of the station or structures after 5 years and after 10 years. Development of the plan should include field consultations with the visual specialist to ensure that the objectives of this measure are achieved.

**V-20b Transition Station Design Evaluation.** This measure shall be implemented if the proposed transition station, the Sneath Lane Alternative Transition Station, or the West of Skyline Transition Station are approved. At least 120 days prior to construction of the transition station, PG&E shall provide to the CPUC for review and approval a detailed Transition Station Design Evaluation that provides the rationale for and against constructing a transition pole instead of a transition station and sufficient analysis, including visual simulations, to enable third-party evaluation of the two transition approaches. The relative value of biological habitat lost and visual impact created with each approach shall be considered in detail.



Figure D.3-19A. Existing View – Key Viewpoint 18, Transition Station  
*For security reasons this figure is not included in the online version of the report.*



Figure D.3-19B. Visual Simulation – Key Viewpoint 18, Transition Station  
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Figure D.3-19B. Visual Simulation – Key Viewpoint 18, Transition Station (rev)  
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### **D.3.3.5 230 kV Underground Transmission Line**

The underground portion of the Proposed Project would be located beneath existing paved streets or transportation ROWs. Therefore, there would be no visible evidence of this portion of the Proposed Project and no additional long-term visual impacts would occur from project operation. Only temporary construction impacts (Impact V-1) would occur and Mitigation Measure V-1a (construction screening) should be implemented.

### **D.3.3.6 Substations, Switchyards, and Taps**

#### **Impact V-21: Visual Impact of Modifications to Substations, Switchyards, and Taps**

The Proposed Project would require modifications of existing facilities, new structures and/or equipment, and/or reconnections at Jefferson Substation, Ralston Substation, Hillsdale Junction Substation, Martin Substation, San Mateo Substation, Monta Vista Substation and tap locations (Crystal Springs, Millbrae, San Andreas, San Bruno and Watershed). In all cases, to the extent that the Proposed Project features are visible to the public (most notably new tubular steel poles), the new structures and equipment would appear consistent with the visual characteristics of the existing structures and equipment, resulting in low to low-to-moderate visual contrast. Any perceptible changes would appear subordinate to co-dominant in the landscape. To the extent it is noticeable, any additional view blockage would generally be low-to-moderate to moderate.

The resulting overall visual change would be generally low-to-moderate. In the context of the existing landscape sensitivities at these existing facility sites (ranging from low-to-moderate to moderate), the resulting visual impacts would be adverse, but not significant (Class III). Therefore, no additional mitigation measures are recommended beyond Mitigation Measures V-1a through V-20a, and the APMs contained in Table D.3-2 above.

## **D.3.4 Southern Area Alternatives**

### **D.3.4.1 PG&E Route Option 1B – Underground**

This underground route would follow Cañada Road from Jefferson Substation to its connection with Skyline Boulevard, which it would then follow to Trousdale Drive. The route would turn east to El Camino Real and then north to San Bruno Avenue where it would connect with the underground route of the Proposed Project.

#### **Environmental Setting**

From Jefferson Substation until it crosses to the east side of I-280 at Hayne Road, the underground route would pass through predominantly naturally appearing landscapes with little development. These areas are highly scenic and receive substantial recreation use. The overall visual sensitivity of these landscapes ranges from moderate-to-high to high depending on the quality, integrity, and visibility of the surrounding viewsheds. Once the route crosses to the east side of I-280, it generally passes through suburban residential areas along Skyline Boulevard and Trousdale Drive. Visual Sensitivity along this portion of the underground route would be moderate-to-high, reflecting a somewhat lower visual quality of the existing landscapes. Once the route turns on El Camino Real, overall visual sensitivity drops to moderate, reflecting the lower quality of the intensely urban landscape, dominated by commercial land uses and infrastructure.

## Environmental Impacts and Mitigation Measures

The underground portion of the Proposed Project would be located beneath existing paved streets or transportation ROWs. Therefore, there would be no visible evidence of this portion of the Proposed Project and no additional long-term visual impacts would occur from project operation.

**Impact V-22: Overhead Crossing of Crystal Springs Dam (Class I or III).** As proposed, Route Option 1B identifies several options for crossing Crystal Springs Dam. The options requiring modification of the dam infrastructure (attaching the cable to the face of the dam or to the top of the dam) would not be noticeable as distinctly separate facilities. In addition, the underwater crossing around the dam would not create visual impacts. Therefore, for those types of dam crossings, there would be no long-term visual impacts and no additional mitigation measures are recommended.

However, if the overhead crossing of the dam is implemented, the underground transmission line would have to transition to aboveground to circumnavigate the Crystal Springs Dam. Two transition towers would be required, one south of the dam and one north of the dam as shown on Figure Ap.1-2B (in Appendix 1). These structures would cause the introduction of complex industrial features in two localized areas that are primarily natural in appearance and lacking similar industrial features (Impact V-22). While a portion of these structures could be screened by landscaping placed around the structures, much of the structures would still be visible, resulting in high degrees of visual contrast. The degree of overall visual change would be high and in the context of the existing moderate-to-high visual sensitivities of the existing landscapes in these two locations, the resulting visual impacts would be significant and could not be mitigated to levels that would not be significant (Class I). However, Mitigation Measures V-20a and V-20b should be implemented to lessen the visual impact of the transition structures.

In its comment letter on the Draft EIR, PG&E suggested a modified overhead crossing of the dam (see Figure Ap.1-2C). This crossing would have less impact than the crossing evaluated in the previous paragraph, because only one transition tower would be required and it would be located in a less visible location (along Crystal Springs Road under the I-280 bridge). The impacts of this route would be the same as the Proposed Project from Towers 6/35 to 6/38 (no adverse impacts were identified). Mitigation Measure V-20a should be implemented to screen the transition structure. The visual impact would be less than significant (Class III).

### Comparison to Proposed Route Segment

PG&E Route Option 1B would result in substantially fewer visual impacts compared to the Proposed Project. While Route Option 1B with the originally proposed overhead crossing of Crystal Springs Dam would create significant Class I impacts associated with the two transition stations necessary to circumnavigate the dam, these significant impacts would be more than offset by the elimination of the numerous Class I impacts associated with the incremental increases in structure size at most tower locations under the Proposed Project. As noted above, the overhead crossing of the dam illustrated in Figure Ap.1-2c would create adverse, but less than significant visual impacts. In addition, if the underwater cable around the dam is utilized, there would not be a significant impact on this alternative.

#### D.3.4.2 Partial Underground Alternative

From Jefferson Substation to the proposed Tower 2/13 location, a new overhead line would be constructed in close proximity to Cañada Road. From Tower 2/13 to Ralston Substation the route would be the same as the proposed route. North of Ralston Substation, the route would be installed underground from Towers 4/27 to 6/37 and from Towers 7/39 to 8/50. The route would then cross to the west side of I-280 and proceed north to join the proposed route at Tower 8/53. North of Tower 9/62, the route would stay to the west side



of I-280, proceeding north through watershed lands to connect to the proposed route at Tower 10/69. From Tower 10/69 to the proposed transition station, this alternative would be the same as the Proposed Project.

### Environmental Setting

With the exception of the landscape north of the Crystal Springs Golf Course and west of I-280 (between Towers 9/62 and 10/69), the existing setting for the route has been described under the Proposed Project and Underground 1B Alternative above. That portion of the route north of Crystal Springs Golf Course and west of I-280 passes through a relatively natural appearing landscape though there are access roads, some water district residential structures, and an existing overhead wood pole utility line present. Although the visual quality of the landscape is moderate-to-high there is no public visual access to this area other than what can be seen in fleeting glimpses from I-280. As a result, overall visual sensitivity along this portion of the route would range from low-to-moderate to moderate.

### Environmental Impacts and Mitigation Measures

Figures D.3-20a [\(rev\)](#) and D.3-20b [\(rev\)](#) illustrate the Partial Underground Alternative and the relevant mitigation measures for reduction of visual impacts.

#### ***Impacts V-23, V-24, V-25, and V-26: Partial Underground Alternative***

**Impact V-23: New Towers Along Cañada Road (Class I).** The southern overhead portion of this alternative (Jefferson Substation to Tower 2/13) would introduce large vertical structures with substantial industrial character into the predominantly natural landscape along Cañada Road between I-280 and Edgewood Road. The resulting visual impact (Impact V-23) would be significant and it could not be mitigated (Class I). However, this significant impact would be offset by the removal of the existing 60 kV towers from Edgewood County Park and Pulgas Ridge Open Space on the east side of I-280, which is a long-term benefit to these park facilities. [Figure D.3-20c and D.3-20d provide a view of the existing setting and a simulation of the views of The Triangle with the new towers added, incorporating mitigation defined in Section D.4.4.2 \(biological resources\) to minimize impacts to sensitive resources in The Triangle.](#)

From Towers 2/13 to 4/27, the Partial Underground Alternative would be the same as the Proposed Project route, and the same mitigation measures would apply: Mitigation Measure V-5a (eliminate Tower 2/13), V-6a (tower painting), and V-8a (relocation between Towers 2/18 and 4/25).

**Impact V-24: Transition Towers for Partial Underground Alternative (Class I for Towers 7/39 and 8/50).** Between Towers 4/27 and 8/50, four transition stations would be required which would be more visually impacting than typical transmission towers because of the station's inherent structural complexity and industrial character. Transition stations at Towers 7/39 [\(north of San Mateo Creek\)](#) and 8/50 [\(south of Carolands Substation\)](#) would be particularly exposed. The resulting visual impact (Impact V-24) associated with these new facilities would be significant and could not be mitigated to a less than significant (Class I) level, although Mitigation Measures ~~V-20a and V-20b~~ should be implemented to lessen the visual impact.

[After publication of the Draft EIR, modifications have been considered for two of the four transition towers for the Partial Underground Alternative: Towers 7/39 and 6/37. Tower 7/39 is currently 119 feet high and is located within the fenced yard of a residence on Lakeview Drive.<sup>2</sup> In the Partial](#)

<sup>2</sup> [In the Proposed Project, this tower would be 140 feet tall and would be located immediately west of the residential yard on Watershed Lands between the private land and Caltrans property.](#)

Underground Alternative as originally defined, Tower 7/39 would be relocated as it would be for the Proposed Project: immediately west of the private yard. In response to comments on the Draft EIR, a variety of options were evaluated in an attempt to reduce the visual impact of this tower. The options evaluated are described in detail in Appendix 1, Section 4.2.3 under the heading “Optional Transition Tower Locations for Tower 7/39,” and include consideration of relocating the transition tower further south, crossing Crystal Springs Dam rather than the creek and boring under the I-280 both north and south of the dam, and relocation of the tower further north. The first two options presented significant geotechnical obstacles and legal feasibility issues. The remaining feasible solution is presented in Mitigation Measure V-24a (below), requiring relocation of the transition tower at Tower 7/39 approximately 100 feet further north to increase its distance from the adjacent residences and at least 100 feet from any residential property.

The view of the relocated Tower 7/39 is illustrated in Figures D.3-20e and D.3-20f, which present the existing setting and a simulation of the suggested relocation. Figure D.3-20g is a map illustrating the area of the transition tower. The simulation includes tower painting and landscaping that would be implemented as a result of Mitigation Measures V-6a and V-20a, respectively. As is the case for other sensitive viewing locations, Mitigation Measure V-6a, requiring appropriate tower painting, would be implemented in this location. However, the industrially complex upper portion of structure would remain unscreened and the visual impact of this tower remains significant (Class I). The tower would be visible from a few residences along Lakeview Drive, but it allows the elimination of 10 additional towers (Towers 7/40 through 8/49) adjacent to these same residences and many others in the Town of Hillsborough. The next two existing towers just north of Tower 7/39 are currently visible from these same residences, and the transition tower would allow those towers to be removed so both the 60 kV and 230 kV lines could be installed underground. Therefore, while Mitigation Measure V-24a does not eliminate the significant (Class I) visual impact of the transition tower, it does allow the overall improvement of the visual environment in the Hillsborough area, and it eliminates the disproportionate impact of the existing and proposed location of Tower 7/39 to the immediately adjacent residence.

***Mitigation Measure for Impact V-24:***

**V-24a Relocate Transition Tower 7/39:** If the Partial Underground Alternative is approved, Tower 7/39 shall be relocated approximately 100 feet north of its proposed location (as defined by PG&E), and it is at least 100 feet from the property line of any residence. The specific location shall be defined based on consultation with a visual resources specialist. PG&E shall submit a proposed location and design for the transition structure for CPUC review and approval at least 60 days prior to the start of construction.

Mitigation Measure B-2b would require that the southern transition station for the crossing of San Mateo Creek be relocated further south to avoid removal of a large number of trees. The new location of this transition station or tower would be about 100 feet north of existing Tower 6/36. Existing Tower 6/36 would be removed, and Tower 6/37 would remain as the last tower south of the San Mateo Creek crossing. Views of this site are limited and the station would be substantially screened by surrounding vegetation. The site would be less visible than the existing Tower 6/36 location when viewed from five adjacent and nearby residences. The site would be more visible to approximately two residences, and similarly visible to one residence. The visual impact of this station would not be significant.

Although the locations of two of the transition facilities have been modified (Tower 7/39 to the north and Station 6/37 to the south [near Tower 6/36]), the impact determinations remain the same. The Transition Station near Tower 6/36 would have an adverse but less than significant impact (Class III)

and the impact of the transition tower at Tower 7/39 (Impact V-24) remains significant (Class I) even after implementation of Mitigation Measures V-6a, V-20a, and V-24a.

**Impact V-25: Crossing of I-280 South of Carolands Substation (Class I).** The Partial Underground Alternative includes a crossing of I-280 two towers south of the current freeway crossing near Carolands Substation. The new crossing of I-280 at Tower 8/50 would eliminate two towers north of Carolands Substation that are in front of residences, and place two new towers on the west side of I-280 in locations that would be highly visible to both travelers on I-280 and users of the Crystal Springs Golf Course. These structures would introduce substantial visual contrast, structural prominence, and view blockage into the existing landscape. The resulting visual impact (Impact V-25) associated with these new facilities would be significant and could not be mitigated to less than significant levels (Class I).

However, this impact would be offset by ~~(a) the rerouting of the segment between Towers 9/63 to 10/68 to the west side of I-280, thereby eliminating the significant visual impact that would be experienced by the residential areas along Loma Vista Drive and Skyview Drive on the east side of I-280 (see Mitigation Measure V-15a), and (b) the relocation of Tower 10/69 further downslope out of the primary cone of vision of northbound travelers on I-280.~~

The Partial Underground Alternative would also benefit from implementation of Mitigation Measure V-14a (Impact V-14, Crystal Springs Golf Course), which would eliminate three towers within the golf course.

**Impact V-26: New Route Segment West of I-280 (Class III).** The new route segment north of Crystal Springs Golf Course and west of I-280 (Towers 9/62 to 10/69) would have very limited public visual access (briefly from I-280) and only intermittently through heavy vegetation along the Sawyer Camp Trail) and would result in a visual impact (Impact V-26) that would be adverse but less than significant (Class III). However, it should be noted that this conclusion also assumes that a new Tower 10/69 location would be placed at a substantially lower elevation than is currently proposed since the new route would be approaching from a lower elevation to the south and west. Moving Tower 10/69 downslope would substantially reduce its visibility to I-280. The application of Mitigation Measure V-6a (appropriate structural painting) to Towers 9/62-10/69 would better blend the towers with their respective backdrops and would further reduce the degree of visual impact.

From Tower 11/71 to the transition station, the impacts of the Partial Underground Alternative would be the same as the Proposed Project and would be subject to the same Visual Resources mitigation measures: V-15b (steel tubular poles), V-16a (relocate Tower 11/75), V-17a (relocate Tower 13/84), V-17b (eliminate Towers 12/80 and 12/82), and V-19a (eliminate Towers 13/89, 14/91, 14/92, and 14/94).

### **Comparison to Proposed Route Segment**

Compared to the Proposed Project, the Partial Underground Alternative between Jefferson Substation and Tower 2/12 would be substantially less visually impacting on views from I-280, Edgewood County Park, and Pulgas Ridge Open Space because of the elimination of towers along the east side of I-280. Between Towers 2/12 and 4/27, the Partial Underground Alternative would overlap with the Proposed Project and would have similar visual impacts, which would be subjected to the same mitigation measures. Between Towers 4/27 and 8/50, the Partial Underground Alternative would be substantially less impacting than the Proposed Project because of the undergrounding of structures that would occur along the residential areas immediately to the east of I-280. However, under the Partial Underground Alternative, the new crossing of I-280 at Tower 8/50 and the new Towers 8/51 and 8/52 along Crystal

Springs Golf Course would result in visual impacts substantially greater than the visual impact of the proposed Towers 8/50-53 and the proposed crossing of I-280. This occurs because the proposed locations under this alternative are substantially more visually exposed to travelers on I-280 and users of the Golf Course compared to the less visible structure locations under the Proposed Project. Extending north of Crystal Springs Golf Course on the west side of I-280, the Partial Underground Alternative between Towers 10/62 and 10/69 would be visually less impacting than the Proposed Project along the east side of I-280 given the limited public visibility of this portion of the route and the elimination of the significant visual impacts to the residential areas along Loma Vista Drive and Skyview Drive on the east side of I-280. This alternative would also cause the relocation of the visually prominent Tower 10/69 further downslope out of the primary cone of vision of travelers on northbound I-280. From Tower 11/71 to the transition station, the Partial Underground Alternative would overlap with the Proposed Project and would cause visual impacts similar to the Proposed Project and would be subject to the same Visual Resources mitigation measures as listed above.

Figure D.3-20A. Partial Underground Alternative with Visual Mitigation, Southern Portion (rev)  
*For security reasons this figure is not included in the online version of the report.*



Figure D.3-20B. Partial Underground Alternative with Visual Mitigation, Northern Portion (rev)  
*For security reasons this figure is not included in the online version of the report.*





Figure D.3-20C. Existing View – Partial Underground Alternative, Cañada Road  
*For security reasons this figure is not included in the online version of the report.*



Figure D.3-20D. Visual Simulation – Partial Underground Alternative, Cañada Road  
*For security reasons this figure is not included in the online version of the report.*



Figure D.3-20E. Existing View – Tower 7/39 Transition Structure  
*For security reasons this figure is not included in the online version of the report.*



Figure D.3-20F. Visual Simulation – Tower 7/39 Transition Structure  
*For security reasons this figure is not included in the online version of the report.*





Figure D.3-20G. Partial Underground Alternative: Detail of Tower 7/39 (Mitigation Measure V-24a),  
Transition Tower Relocation

*For security reasons this figure is not included in the online version of the report.*



## D.3.5 Northern Area Alternatives

### D.3.5.1 West of Skyline Transition Station Alternative

#### *Environmental Setting*

The environmental setting for this location has previously been covered under the Proposed Project for the vicinity of Tower 14/93.

#### *Environmental Impacts and Mitigation Measures*

##### **Impact V-27: Transition Station / West of Skyline Boulevard**

The transition station would introduce a complex industrial feature into a landscape generally lacking such industrial characteristics other than the prominent vertical forms of the existing 60 kV transmission line (Impact V-27). The resulting visual impact would be significant but mitigable to less than significant levels (Class II). Effective implementation of Mitigation Measure V-20a would screen a majority of the lower complex industrial forms from public view. The resulting visual impact would be adverse but less than significant (Class III). Also, Mitigation Measure V-6a (structure painting) would help the structures to better blend with the landscape backdrop. Although this transition station alternative would result in an adverse but less than significant (Class III) visual impact, it is also recommended that Mitigation Measure V-27a be implemented, which would require an additional study to be conducted to not only locate the most appropriate site for the transition station west of Skyline Boulevard, but also to evaluate the potential benefits of constructing a transition pole (requiring a taller structure but less ground disturbance) rather than a transition station.

#### *Mitigation Measure for Impact V-27*

**V-27a West of Skyline Transition Station Siting Study.** At least 120 days prior to construction of the transition station, PG&E shall provide to the CPUC for review and approval a detailed Transition Station Siting Study that details the analyses conducted to determine the least visually impacting location for the West of Skyline Boulevard Transition Station. The Study shall also provide the rationale for and against constructing a transition pole instead of a transition station and sufficient analysis, including visual simulations, to enable third-party evaluation of the two transition approaches.

Also, Mitigation Measure V-6a (requiring appropriate structure painting) must be applied to the transition station, thereby reducing structure visual contrast with the landscape background. Mitigation Measure V-20a (requiring landscaping) must also be applied to the transition station to reduce the station's visibility.

#### *Comparison to Proposed Transition Station*

Compared to the Proposed Project, this transition station alternative would be less centrally located, more easily screened by landscaping, and could be visually mitigated to a level that is less than significant. In contrast, the proposed transition station would be on a highly visible corner of an intersection across from an existing shopping center, causing significant visual impacts that could not be mitigated to less than significant levels.

## **West of Skyline Transition Station with Proposed Underground Route**

### ***Environmental Setting***

The environmental setting for this alternative has previously been covered for that portion of the Proposed Project from Towers 14/93 to 14/95, and for the proposed transition station site.

### ***Environmental Impacts and Mitigation Measures***

The environmental impact and mitigation measure for the transition station would be the same as that for the West of Skyline Transition Station Alternative addressed above (Impact V-27). The underground route portion of this alternative would not be visible during project operation and no additional long-term visual impacts would occur. No additional mitigation measures are proposed beyond Mitigation Measures V-1a (construction), V-6a (structure painting), V-20a (landscaping), [V-20b \(design evaluation\)](#) and V-27a (design evaluation) proposed above for visual impacts of transition structures or stations.

### ***Comparison to Proposed Route Segment***

Compared to the Proposed San Bruno Avenue Transition Station, the West of Skyline Transition Station would be less centrally located, more easily screened by landscaping, and could be visually mitigated to a level that is less than significant. In contrast, the proposed transition station would be on a highly visible corner of an intersection across from an existing shopping center, causing significant visual impacts that could not be mitigated to less than significant levels. The underground portion of this alternative would have visual impacts similar to the proposed underground route.

## **West of Skyline Transition Station with Sneath Lane Underground Route**

### ***Environmental Setting***

The underground route from the West of Skyline Transition Station location to San Bruno Avenue has previously been described for the Proposed Project in the vicinity of Towers 14/92 to 14/95. North of San Bruno Avenue, views from Skyline Boulevard are somewhat limited by adjacent terrain and vegetation. The landscape is predominantly suburban in character with some hillside residential development visible to the west. Once the route turns east on Sneath Lane, the landscape on both the north and south sides of Sneath Lane is predominantly residential in character though at various points along Sneath Lane the residential developments are at different elevations relative to Sneath Lane. There is also substantial vegetative screening along this portion of Sneath Lane. East of I-280, Golden Gate National Cemetery borders Sneath Lane to the north while residential development comprises the landscape to the south until it transitions to commercial and office development as Sneath Lane approaches El Camino Real and then crosses to join the proposed route at the BART ROW.

### ***Environmental Impacts and Mitigation Measures***

The environmental impact and mitigation measure for the transition station would be the same as that for the West of Skyline Transition Station Alternative addressed above (Impact V-27). The underground route portion of this alternative would not be visible during project operation and no additional long-term visual impacts would occur. No additional mitigation measures are proposed beyond Mitigation Measures V-1a (construction), V-6a (structure painting), V-20a (landscaping), and V-27a (design evaluation) proposed above for visual impacts of transition structures or stations.

### ***Comparison to Proposed Route Segment***

Compared to the Proposed San Bruno Avenue Transition Station, the West of Skyline Transition Station would be less centrally located, more easily screened by landscaping, and could be visually mitigated to a level that is less than significant. In contrast, the proposed transition station would be on a highly visible corner of an intersection across from an existing shopping center, causing significant visual impacts that could not be mitigated to less than significant levels. The underground portion of this alternative would have visual impacts similar to the proposed underground route.

### **West of Skyline Transition Station with Westborough Boulevard Underground**

#### ***Environmental Setting***

The underground route from the West of Skyline Transition Station location to Sneath Lane has previously been described for the Proposed Project in the vicinity of Towers 14/92 to 14/95 and the West of Skyline Transition Station With Sneath Lane Underground Alternative. North of Sneath Lane, views from Skyline Boulevard are quite limited as trees on both sides of the road limit views to the east and west. The existing 60 kV transmission line crosses from the west side of Skyline Boulevard to the east side and parallels the road behind the trees. This screening continues until College Drive. Between College Drive and Westborough Boulevard, residential development is the predominant landscape feature to the west. On the east side of Westborough Boulevard, trees give way to open panoramic views of South San Francisco as the terrain drops away and there is limited roadside vegetation. Just before this area the existing 60 kV transmission line diverges from Skyline Boulevard and drops down through the residential areas below. Once the route turns east on Westborough Boulevard, the landscape on both the north and south sides of Sneath Lane is predominantly suburban mixed use residential and commercial in character though at various points along Westborough Boulevard views from these land uses are substantially screened by vegetation. Further east, the California Golf Club of San Francisco is located along the south side of Westborough Boulevard. As Westborough Boulevard approaches El Camino Real and then crosses to the BART ROW, the landscape becomes more intensely urban with commercial and office uses predominating.

#### ***Environmental Impacts and Mitigation Measures***

The environmental impact and mitigation measure for the transition station would be the same as that for the West of Skyline Transition Station Alternative addressed above (Impact V-27). The underground route portion of this alternative would not be visible during project operation and no additional long-term visual impacts would occur. No additional mitigation measures are proposed beyond Mitigation Measures V-1a (construction), V-6a (structure painting), V-20a (landscaping), V-20b (design evaluation), and V-27a (design evaluation) proposed above for visual impacts of transition structures or stations.

### ***Comparison to Proposed Route Segment***

Compared to the Proposed San Bruno Avenue Transition Station, the West of Skyline Transition Station would be less centrally located, more easily screened by landscaping, and could be visually mitigated to a level that is less than significant. In contrast, the proposed transition station would be on a highly visible corner of an intersection across from an existing shopping center, causing significant visual impacts that could not be mitigated to less than significant levels. The underground portion of this alternative would have visual impacts similar to the proposed underground route.

### **D.3.5.2 Sneath Lane Transition Station Alternative**

#### ***Environmental Setting***

The Sneath Lane Transition Station Alternative would be located at the existing Sneath Lane Substation. The substation site has a highly complex industrial character. However, views of the substation are somewhat limited because the substation is located on higher terrain above Skyline Boulevard to the west and is substantially screened from view. Visibility of the substation is also limited from Sneath Lane.

#### ***Environmental Impacts and Mitigation Measures***

**Impact V-28: Sneath Lane Transition Station.** The addition of the transition facilities to the Sneath Lane Substation would add industrial features to an industrial setting containing similar features, with limited public visual access. To the extent that the new transition station facilities are visible from public vantage points, the resulting visual impacts (Impacts V-1, V-28, and excessive color contrast similar to V-6a) would be adverse but less than significant (Class III). Effective implementation of Mitigation Measures V-1a (construction), V-6a (structure painting), V-20a (landscaping), and V-20b (design evaluation) would further reduce the potential visual impact by ensuring that (a) construction activities are appropriately managed, (b) structures are an appropriate color to facilitate blending with the surrounding landscape, (c) a majority of the lower complex industrial forms are screened from public view, and (d) that the appropriate location and design are implemented. The resulting visual impact would be lessened but would remain adverse but less than significant (Class III).

#### ***Comparison to Proposed Transition Station***

Compared to the Proposed San Bruno Avenue Transition Station, the Sneath Lane Transition Station would be less visually intrusive and would not result in significant visual impacts because of its location within the established industrial character of the existing Sneath Lane Substation. In contrast, the proposed transition station would be on a highly visible corner of an intersection across from an existing shopping center, causing significant visual impacts that could not be mitigated to less than significant levels. The underground portion of this alternative would have visual impacts similar to the proposed underground route.

### **Sneath Lane Transition Station with Proposed Underground Route**

#### ***Environmental Setting***

The existing setting has been previously described above under the Sneath Lane Transition Station Alternative (transition station), the West of Skyline Boulevard Transition Station with Sneath Lane Underground Alternative (route along Skyline Boulevard to San Bruno Avenue), and the Proposed Project (route along San Bruno Avenue).

#### ***Environmental Impacts and Mitigation Measures***

The environmental impact and mitigation measure for the transition station under this alternative would be the same as that for the Sneath Lane Transition Station Alternative addressed above (Impact V-28; Mitigation Measure V-20a). The underground route portion of this alternative would not be visible during project operation and no additional long-term visual impacts would occur. No additional mitigation measures are proposed beyond Mitigation Measures V-1a (construction), V-6a (structure painting), V-20a (landscaping), and V-20b (design evaluation), discussed above.

### ***Comparison to Proposed Route Segment***

Compared to the Proposed San Bruno Avenue Transition Station, the Sneath Lane Transition Station would be less visually intrusive and would not result in significant visual impacts because of its location within the established industrial character of the existing Sneath Lane Substation. In contrast, the proposed transition station would be on a highly visible corner of an intersection across from an existing shopping center, causing significant visual impacts that could not be mitigated to less than significant levels. The underground portion of this alternative would have visual impacts similar to the proposed underground route.

### **Sneath Lane Transition Station with Sneath Lane Underground Route**

#### ***Environmental Setting***

The existing setting has been previously described above under the Sneath Lane Transition Station Alternative (transition station) and the West of Skyline Boulevard Transition Station with Sneath Lane Underground Alternative (route along Sneath Lane to BART ROW).

#### ***Environmental Impacts and Mitigation Measures***

The environmental impact and mitigation measure for the transition station under this alternative would be the same as that for the Sneath Lane Transition Station Alternative addressed above (Impacts V-1 and V-20). The underground route portion of this alternative would not be visible during project operation and no additional long-term visual impacts would occur. No additional mitigation measures are proposed beyond Mitigation Measures V-1a (construction), V-6a (structure painting), V-20a (landscaping), and V-20b (design evaluation), discussed above.

### ***Comparison to Proposed Route Segment***

Compared to the Proposed San Bruno Avenue Transition Station, the Sneath Lane Transition Station would be less visually intrusive and would not result in significant visual impacts because of its location within the established industrial character of the existing Sneath Lane Substation. In contrast, the proposed transition station would be on a highly visible corner of an intersection across from an existing shopping center, causing significant visual impacts that could not be mitigated to less than significant levels. The underground portion of this alternative would have visual impacts similar to the proposed underground route.

### **Sneath Lane Transition Station with Westborough Boulevard Underground**

#### ***Environmental Setting***

The existing setting has been previously describe above under the Sneath Lane Transition Station Alternative (transition station) and the West of Skyline Boulevard Transition Station with Westborough Boulevard Underground Alternative (route along Westborough Boulevard to BART ROW).

#### ***Environmental Impacts and Mitigation Measures***

The environmental impact and mitigation measure for the transition station under this alternative would be the same as that for the Sneath Lane Transition Station Alternative addressed above (Impact V-28). The underground route portion of this alternative would not be visible during project operation and no additional long-term visual impacts would occur. No additional mitigation measures are proposed beyond Mitigation Measures V-1a (construction), V-6a (structure painting), V-20a (landscaping), and V-20b (design evaluation), discussed above.

### ***Comparison to Proposed Route Segment***

Compared to the Proposed San Bruno Avenue Transition Station, the Sneath Lane Transition Station would be less visually intrusive and would not result in significant visual impacts because of its location within the existing Sneath Lane Substation with its established industrial character. In contrast, the proposed transition station would be on a highly visible corner of an intersection across from an existing shopping center, causing significant visual impacts that could not be mitigated to less than significant levels. The underground portion of this alternative would have visual impacts similar to the proposed underground route.

### **D.3.5.3 Glenview Drive Transition Tower Alternative**

This transition tower alternative would replace the proposed transition tower at San Bruno Avenue and Glenview Drive. This alternative could be used with the Proposed Project route, with an underground transmission line route down Glenview Drive to San Bruno Avenue. All other route segments could be used exactly as for the West of Skyline Transition Station, which is due west and across Skyline Boulevard from this site.

#### **Environmental Setting**

The Glenview Drive Transition Tower Alternative would be located between Skyline Boulevard and Glenview Drive across from the City of San Bruno Water Tank. The tower would be placed within the dense tree-lined divider that separates the two roads and would require the removal of two or three trees. Views of the tower site would be available to northbound and southbound Skyline Boulevard and Glenview Drive. The structure would be substantially screened from in-line views while in the primary cone of vision along Skyline Boulevard. As vehicles reach a point where the structure is less screened from view, the structure would be beyond the primary cone of vision and would be passed relatively quickly. Also, there are few motorists at this point on Glenview Drive. Indirect views would also be available from a few residential apartments north of the water storage facility.

#### **Environmental Impacts and Mitigation Measures**

**Impact V-29: Glenview Drive Transition Tower.** The addition of the transition tower within the treeline between Skyline Boulevard and Glenview Drive would add a complex industrial feature to a landscape with similar though less complex features on the opposite side of Skyline Boulevard. To the extent that the new transition tower is visible from Skyline boulevard, views of the structure would be relatively brief. Also, relatively few motorists would pass by the structure on Glenview Drive and the structure would not be a prominent feature in views from the residential apartments located north of the water storage facility. The resulting visual impacts (Impacts V-1, V-29, and excessive color contrast similar to V-6a) would be adverse but less than significant (Class III). Effective implementation of Mitigation Measures V-1a (construction), V-6a (structure painting), and V-20a (landscaping) would further reduce the potential visual impact by ensuring that (a) construction activities are appropriately managed, (b) the structure is an appropriate color to facilitate blending with the surrounding landscape, and (c) the lower portion of the structure is screened from public view. The resulting visual impact would be lessened but would remain adverse but less than significant (Class III).

#### **Comparison to Proposed Transition Station**

Compared to the Proposed San Bruno Avenue Transition Station, the Glenview Drive Transition Structure would be substantially less visually intrusive because of its in-line location within the stand of trees between Skyline Boulevard and Glenview Drive and would not result in significant visual impacts. In contrast, the proposed transition station would be on a highly visible corner of an intersection across from an existing



shopping center, causing significant visual impacts that could not be mitigated to less than significant levels. The underground portion of this alternative would have visual impacts similar to the proposed underground route.

#### **D.3.5.4 Trousdale Drive Transition Tower Alternatives**

There are two locations for the Trousdale Drive Transition Station Alternatives: one would allow connection of the Partial Underground Alternative from the south to connect with Route Option 1B down Trousdale Drive, and the second would allow connection of the Proposed Project with Route Option 1B.

##### ***Environmental Setting***

The Proposed Project transition tower location would be near Tower 11/71, on SFPUC Watershed Lands, about 0.25 miles west of the southwestern end of Trousdale Drive. The Partial Underground Alternative transition tower location would be about 0.5 miles west of the end of Trousdale Drive, near an existing dirt road on Watershed Lands. In both cases, the underground transmission line route would be within existing SFPUC roads that lead to the SFPUC's Trousdale Gate. Both sites would be located in undeveloped watershed lands adjacent to an existing watershed access road in the vicinity of two non-residential Water District buildings. Although the Partial Underground Alternative site is located in a relatively open grassy area, there is no public visual access to this portion of the Watershed Lands. For use with the Proposed Project, the Trousdale Drive Transition Tower would be located in undeveloped Watershed Lands adjacent to an existing watershed access road adjacent to existing 60 kV transmission line Tower 11/70. The site is located in a relatively open grassy area that is surrounded by trees. There is no public visual access to this portion of the watershed lands.

##### ***Environmental Impacts and Mitigation Measures***

**Impact V-30: Trousdale Drive Transition Towers – Partial Underground Alternative.** The addition of the transition facilities to this portion of the Watershed Lands would introduce industrial features to a predominantly natural setting lacking such features. However, the tower would not be visible to the public because there is no public visual access to this area. Even though the tower would not be visible at present, there is the possibility that at some point in the future, public access could be allowed in this area. At that time, the tower would be perceived as a significant visual impact if left unscreened. Therefore, effective implementation of Mitigation Measures V-1a (construction), V-6a (structure painting), and V-20a (landscaping) are recommended to reduce the potentially future visual impact by ensuring that (a) construction activities are appropriately managed, (b) structures are an appropriate color to facilitate blending with the surrounding landscape, and (c) a majority of the lower complex industrial forms are screened from public view.

**Impact V-31: Trousdale Drive Transition Tower - Proposed Project Tower 11/70.** The location of the transition facilities in this portion of the watershed lands would result in the introduction of industrial features to a predominantly natural setting lacking such features. However, the tower would not be visible to the public because there is no public visual access to this area. Even though the tower would not be visible at present, there is the possibility that at some point in the future, public access could be allowed in this area. At that time, the tower would be perceived as a significant visual impact if left unscreened. Therefore, effective implementation of Mitigation Measures V-1a (construction), V-6a (structure painting), and V-20a (landscaping) are recommended to reduce the potentially future visual impact by ensuring that (a) construction activities are appropriately managed, (b) structures are an appropriate color to facilitate blending with the surrounding landscape, and (c) a majority of the lower complex industrial forms are screened from public view.

### ***Summary of Impacts***

The Trousdale Drive Transition Towers (at either Tower 11/70 or at the Partial Underground Alternative connection) would not be visible to the public and would not result in significant visual impacts. Mitigation is recommended to ensure appropriate landscaping and tower design.

### ***D.3.5.5 Golf Course Drive Transition Station Alternative***

The Golf Course Drive Transition Station would allow implementation of two scenarios. First, the Route Option 1B alternative in which the 230 kV line would be installed underground in Cañada Road and Skyline Boulevard could transition to overhead at this location. From there, it would connect with the Partial Underground Alternative or the Proposed Project, continuing north to one of the four transition station options near San Bruno Avenue. This would eliminate the use of the portion of Route Option 1B route north of Hayne Road (including Trousdale Drive and El Camino Real).

The second option for the use of the Golf Course Drive Transition Station would be to allow an underground crossing of the 230 kV line below the I-280 in the Partial Underground Alternative. In the original definition of the Partial Underground Alternative, both the 60 and 230 kV lines would be underground from the transition tower north of San Mateo Creek (Tower 7/39) to another transition tower south of Carolands Substation (Tower 8/50). A 60/230 kV transition tower at the 8/50 location would create a significant visual impact, as defined in Section D.3.4.2. However, this transition station will allow the 230 kV line to turn west when the line reaches Hayne Road and cross below the I-280 freeway, so there will be a need only for a single-circuit 60 kV transition tower at the 8/50 location so the visual impact would be substantially reduced. The 60 kV line would then enter Carolands Substation and cross the I-280 freeway overhead from Tower 8/50 to the west.

### ***Environmental Setting***

The Golf Course Drive Transition Station would be located in a grassy depression between the southbound I-280 Hayne Road off-ramp and Golf Course Drive, just north of the Golf Course entry gate. The site is undeveloped and it is in close proximity to the dominant horizontal forms of the I-280 transportation infrastructure. Much of the east and south sides of the site are bordered by existing trees. Views from I-280, Skyline Boulevard, and Golf Course Drive tend to be attracted to the open landscape to the south and east of the site. However, some brief views from I-280 and the Hayne Road off-ramp would view out over the transition station site. The site is also prominently within views of motorists traveling southbound on Golf Course Drive as they leave Crystal Springs Golf Course. The site is also visible from an open grassy area slightly to the southwest within the Golf Course property that is available for private functions including weddings.

### ***Environmental Impacts and Mitigation Measures***

**Impact V-32: Golf Course Drive Transition Station.** The location of the transition station between Golf Course Drive and the I-280 Hayne Road off-ramp would result in the introduction of industrial features to a predominantly natural setting lacking such features. While there are visually dominant, horizontal forms associated with the transportation facilities (freeway and overpass) immediately adjacent to the site, there are no existing features with similarly complex industrial character. The resulting visual impact would be significant but mitigable to less than significant levels (Class II). Mitigation Measure V-6a (structure painting) would help the structures to better blend with the landscape backdrop. Effective implementation of Mitigation Measure V-1a would appropriately manage construction and Mitigation Measure V-20a would screen a majority of the lower complex industrial forms from public view and ensure retention of existing trees. The resulting visual impact would be less than significant.

Effective implementation of the mitigation measures defined above would reduce the potentially significant visual impact by ensuring that (a) construction activities are appropriately managed, (b) structures are an appropriate color to facilitate blending with the surrounding landscape, and (c) a majority of the lower complex industrial forms are screened from public view.

Construction of the Golf Course Drive Transition Station for use with the Partial Underground Alternative would allow a substantial reduction in the size of the transition tower at Tower 8/50, because that tower would be used only for the 60 kV circuit. This transition station would relocate the 230 kV transition west of the I-280 Freeway. As a result, the significant (Class I) impact associated with the transition tower under the Partial Underground Alternative (see Section D.3.4.2, Impact V-24) would be eliminated with use of this transition station.

Use of the Golf Course Drive Transition Station with the Partial Underground Alternative or the Proposed Project would require relocation of 230 kV towers from the east to the west side of the I-280 freeway. Towers would be located between Golf Course Drive and the I-280 freeway. This alternative would not eliminate the significant (Class I) visual impact identified in Impact V-25 (Section D.3.4.2), which results from the more southerly overhead crossing of the I-280 and installation of new towers west of the freeway.

### ***Summary of Impacts***

The Golf Course Drive Transition Station would not be highly visible, given the existing presence of terrain and vegetation that would help to screen the station. Also, the location of the Golf Course Drive site lends itself to more effective screening through the strategic planting of new trees, resulting in an overall adverse but not significant visual impact following mitigation.

### **D.3.5.6 Cherry Avenue Alternative**

This alternative extends from San Bruno Avenue, north along Cherry Avenue to Sneath Lane. It then turns east to follow Sneath Lane to the BART ROW.

#### **Environmental Setting**

The landscape along Cherry Avenue is suburban/urban in character with residential, commercial, and office park uses bordering Cherry Avenue on both the east and west. The environmental setting for Sneath Lane has previously been discussed under the West of Skyline Transition Station with Sneath Lane Underground Alternative.

#### **Environmental Impacts and Mitigation Measures**

This underground route would not be visible during project operation and no long-term visual impacts would occur. Therefore, only temporary construction impacts (Impact V-1) would occur and no additional mitigation measures are proposed beyond Mitigation Measure V-1a (construction) previously discussed.

#### **Comparison to Proposed Route Segment**

The short-term construction impacts of the Cherry Avenue underground route would be similar to the impacts of the Proposed Project underground route except that the Proposed Project passes through mostly commercial and industrial uses and the Cherry Avenue Alternative passes through primarily residential and commercial uses. Also, there would be no long-term visual impacts of either the Proposed Project underground route or the Cherry Avenue underground route.

### **D.3.5.7 PG&E's Route Option 4B – East Market Street**

Route Option 4B-East Market Street would follow Hillside Boulevard for 0.4 miles and then turn northeast into Market Street where it would rejoin the proposed route at Orange Street.

#### **Environmental Setting**

The existing landscape along Hillside Boulevard is comprised of mixed use residential, commercial, and industrial features whereas the landscape along East Market Street appears more suburban with residential on the north side of the street and the Colma Elementary School on the south side of the street.

#### **Environmental Impacts and Mitigation Measures**

This underground route would not be visible during project operation and no long-term visual impacts would occur. Therefore, only temporary construction impacts (Impact V-1) would occur and no additional mitigation measures are proposed beyond Mitigation Measure V-1a (construction) previously discussed.

#### **Comparison to Proposed Route Segment**

The short-term construction impacts of the East Market Street underground route would be similar to the impacts of the Proposed Project underground route. Also, there would be no long-term visual impacts of either the Proposed Project underground route or the East Market Street underground route.

### **D.3.5.8 Junipero Serra Alternative**

This route alternative would extend north from Westborough Boulevard along Junipero Serra Boulevard before turning east at Serramonte Boulevard to Hillside Boulevard where it would rejoin the proposed route.

#### **Environmental Setting**

The existing landscape along Junipero Serra Boulevard is predominantly suburban residential with most housing backing on to Junipero Serra Boulevard and separated from the travel corridor by fencing. There is also tree screening along portions of the corridor and trees within a central median as well. As a result, most views would be from motor vehicles. Serramonte Boulevard between Junipero Serra and Hillside Boulevard is predominantly urban/commercial in character with car dealerships lining both sides of the street.

#### **Environmental Impacts and Mitigation Measures**

This underground route would not be visible during project operation and no long-term visual impacts would occur. Therefore, only temporary construction impacts (Impact V-1) would occur and no additional mitigation measures are proposed beyond Mitigation Measure V-1a (construction) previously discussed.

#### **Comparison to Proposed Route Segment**

The short-term construction impacts of the Junipero Serra Boulevard underground route would be similar to the impacts of the Proposed Project underground route. Also, there would be no long-term visual impacts of either the Proposed Project underground route or the Junipero Serra Boulevard underground route.

### D.3.5.9 Modified Existing 230 kV Underground ROW

#### Environmental Setting

This alternative would pass through a mosaic of urban landscapes exhibiting the diverse visual characteristics typically seen in urban residential, commercial, office, and industrial uses. The route would generally parallel major travel and transit corridors and would be visible to motorists, pedestrians, office workers, and residents. Along El Camino Real, the landscape is predominantly commercial in character. However, that portion of the route along San Antonio and Huntington Avenues would lie within the BART ROW, directly across from residential neighborhoods. North of San Bruno Avenue, the route becomes more industrial in character as it makes its way eventually to the east side of Highway 101 and then passes through several office parks. Eventually, the route crosses back over to the west side of Highway 101 and connects with Bayshore Boulevard at the base of San Bruno Mountain.

Route Options A through F. These route options would pass through commercial and industrial areas near Highway 101 in San Bruno, South San Francisco, and Brisbane.

#### Environmental Impacts and Mitigation Measures

This underground route would not be visible during project operation and no long-term visual impacts would occur. Therefore, only temporary construction impacts (Impact V-1) would occur and no additional mitigation measures are proposed beyond Mitigation Measure V-1a (construction) previously discussed.

Route Options A through F. There would be no difference in visual impact from the route options to the originally proposed alternative route.

#### Comparison to Proposed Route Segment

The short-term construction impacts of the Modified Existing 230 kV Underground route would be similar to the impacts of the Proposed Project underground route; however since this alternative is 30% shorter than the Proposed Project's underground segment, the construction activity would be expected to be visible for a shorter duration. Also, there would be no long-term visual impacts of either the Proposed Project underground route or this alternative underground route.

### D.3.6 Environmental Impacts of the No Project Alternative

Under the No Project Alternative, new transmission and/or generation capacity would need to be developed to compensate for existing system limitations and anticipated load growth. This scenario assumes that certain transmission system improvements would be made (identified in Section C.6), but these improvements would not result in substantial new construction of facilities. To the extent that visual impacts would result from the system upgrades, impacts would be adverse but less than significant (Class III).

Under this scenario, it is assumed that two of the Williams turbines would be installed at Potrero Power Plant, one turbine would be installed at the San Francisco Airport, and one turbine would be installed at the CCSF steam plant. Installation of the turbines at these facilities may result in significant adverse visual impacts. However, given that the proposed locations for the turbines are more industrial and urban in character compared to the Proposed Project, it is anticipated that the resulting visual impacts would be less than those of the Proposed Project and easier to mitigate. The other options under this alternative including Interruptible Load Program, Demand-Side Management, and Curtailment of Electric Service would not result in the construction of new or modification of existing facilities and no visual impacts would result.

### D.3.7 Mitigation Monitoring, Compliance, and Reporting Table

Table D.3-3 presents the mitigation monitoring, compliance, and reporting table for Visual Resources.

Table D.3-3. Mitigation Monitoring Program – Visual Resources

Proposed Project and All Alternatives	
<b>IMPACT V-1</b>	<b>Short-Term Visual Impacts Associated with Project Construction Equipment, Materials, and Personnel as well as Construction Staging Areas (Class III).</b>
<b>MITIGATION MEASURE</b>	<p><b>V-1a: Reduce visibility of construction activities and equipment.</b> If visible from nearby residences and roadways, <del>project substation and transition station</del> construction sites <del>(not including underground construction routes)</del> as well as all staging and material and equipment storage areas shall be visually screened with temporary screening fencing. Fencing will be of an appropriate design and color for each specific location. All evidence of construction activities, including ground disturbance due to staging and storage areas, shall be removed and all disturbed areas shall be remediated to an original or improved condition upon completion of construction including the replacement of any vegetation or paving removed during construction. PG&amp;E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.</p> <p><b>APM 8.1: Storage and Site Cleanup.</b> PG&amp;E will keep construction-related activity as clean and inconspicuous as practical by storing building materials and equipment with the proposed construction staging areas or generally away from public view and removing construction debris promptly at regular intervals.</p> <p><b>APM 8.2: Recontouring.</b> Recontouring of disturbed, graded areas at the structure, substation and tap locations will be implemented to provide a natural appearing landform upon completion of construction.</p> <p><b>APM 8.3: Revegetation.</b> Revegetation at the structure, substation and tap locations using methods that are consistent with Edgewood County Park or SFPUC Watershed resource management practices as appropriate will be implemented to restore the landscape's natural appearance.</p>
<b>Location</b>	Mitigation Measure V-1a applies to all sites and all routes; APMs 8.1 - 8.3 apply to the overhead routes.
<b>Monitoring / Reporting Action</b>	CPUC to verify <u>in the field</u> during construction and following construction.
<b>Effectiveness Criteria</b>	Project construction sites (static) and staging and material and equipment storage areas will be screened during construction and all construction areas will appear in their original or improved condition following construction.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm implementation during and following construction.
Proposed Project	
<b>IMPACT V-2</b>	<b>Increased Structure Size Visible from Edgewood Park Resulting in Increased Structure Skylining, Industrial Character, Project Dominance, and View Blockage (Class I).</b>
<b>MITIGATION MEASURE</b>	<p><b>APM 8.4: Edgewood Park.</b> In order to reduce their potential to appear visually prominent from locations along Edgewood Park recreation trails, PG&amp;E shall, in consultation with San Mateo County Parks and Recreation, install site-specific plantings of native tree and/or shrub planting as appropriate at key locations between the trails and those proposed replacement towers located in the immediate foreground of views from trails to partially screen views of the Project. Selected plant material shall be appropriate to the Edgewood Park setting and shall conform to the County's vegetation management policies for the Park.</p> <p><b>APM 8.15: Transmission Tower and Pole Finish.</b> To minimize potential Project-related glare effects and to better integrate the Project's appearance with respect to the surrounding landscape during the initial period of 1 to 2 years following construction, PG&amp;E shall specify a non-reflective/non-glare finish for all transmission poles and towers to be installed along Segment 1 of the Project route.</p>

**Table D.3-3. Mitigation Monitoring Program – Visual Resources**

<b>Location</b>	APM 8.4 is applicable to the Proposed Project from Mileposts 0 to 1. APM 8.15 is applicable to all overhead transmission towers and poles.
<b>Monitoring / Reporting Action</b>	CPUC to verify in the field during construction and following construction.
<b>Effectiveness Criteria</b>	Views of the project from locations along Edgewood Park recreation trails would be slightly screened by specific plantings of native tree and/or shrub plantings.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm implementation during and following construction.
<b>IMPACT V-3</b>	<b>Increased Structure Size Visible from Southbound Interstate-280 Resulting in Increased Structure Skylining, Project Dominance, and View Blockage (Class I).</b>
<b>MITIGATION MEASURE</b>	<p><b>APM 8.6: Views from I-280.</b> In consultation with the SFPUC Resource Management staff, PG&amp;E shall install site-specific planting to partially screen views of the proposed replacement towers that would be seen along the skyline in foreground views from I-280. The plant material will be native species appropriate to the Watershed lands and shall conform to the SFPUC Watershed vegetation management policies. The trees shall be placed so as to maximize screening effect and to generally preserve existing open landscape vistas.</p> <p><b>APM 8.7: Enhancement of Views from I-280 and Watershed Trails.</b> In consultation with the SFPUC Resource Management staff, PG&amp;E shall selectively prune trees and shrubs and/or remove trees in order to enhance views and vistas seen from the I-280 corridor and key Watershed recreation trails. Pruning and tree removal implemented under this measure shall be consistent with existing SFPUC Watershed resource management plans and shall conform to SFPUC Watershed vegetation management policies.</p>
<b>Location</b>	Locations of the project along Interstate-280 viewable by southbound traffic.
<b>Monitoring / Reporting Action</b>	CPUC to verify consultation with SFPUC Resource Management staff and verify compliance in the field during construction and following construction.
<b>Effectiveness Criteria</b>	Views of the project from southbound Interstate-280 would be slightly screened by specific plantings and vista views would be enhanced.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm implementation during and following construction.
<b>IMPACT V-4</b>	<b>Increased Structure Size Visible from Interstate-280 Northbound Resulting in Increased Structure Skylining, Project Dominance, and View Blockage (Class III).</b>
<b>MITIGATION MEASURE</b>	<b>APM 8.6 and 8.7 (see above)</b>
<b>Location</b>	Locations of the project along Interstate-280 viewable by northbound traffic.
<b>Monitoring / Reporting Action</b>	CPUC to verify consultation with SFPUC Resource Management staff and verify compliance in the field during construction and following construction.
<b>Effectiveness Criteria</b>	Views of the project from northbound Interstate-280 would be slightly screened by specific plantings and vista views would be enhanced.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm implementation during and following construction.

Table D.3-3. Mitigation Monitoring Program – Visual Resources

<b>IMPACT V-5</b>	<b>Increased Structure Size Visible from Cañada Road Resulting in Increased Structure Skylining, Industrial Character, Project Dominance, and View Blockage (Class II).</b>
<b>MITIGATION MEASURE</b>	<p><b>V-5a: Eliminate Tower 2/13.</b> Eliminate Tower 2/13 (as illustrated in Figure D.3-5c) by spanning directly from Tower 2/12 to Tower 2/14. If necessary to accommodate this tower elimination, the location of Tower 2/12 shall be adjusted to increase the span distance (to approximately 1,450 feet). If necessary, tower heights can be increased (up to 30% additional height without creating an additional visual impact) to facilitate longer spans.</p> <p><u>If the elimination of Tower 2/13 would create excessive tower heights (more than 30% greater than the proposed height), the tower may be relocated to an in-line position, upslope between Towers 1/12 and 2/14. It is understood that under this measure, Towers 1/12, 2/13, and 2/14 may be 131, 75, and 125 feet tall, respectively.</u> PG&amp;E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.</p>
<b>Location</b>	The Proposed Project from Tower 2/12 to Tower 2/14.
<b>Monitoring / Reporting Action</b>	CPUC to verify project siting and redesign prior to construction and implementation during construction.
<b>Effectiveness Criteria</b>	Visibility of the Proposed Project and existing 60 kV Transmission line between Tower 2/12 and Tower 2/14 would be minimal when viewed from Cañada Road.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm siting and redesign prior to project construction. Confirm implementation during project construction.
<b>IMPACT V-6</b>	<b>Increased Structure Size Causing a Slight Increase in Structure Prominence When Viewed from I-280 Southbound Vista Point (Class III).</b>
<b>MITIGATION MEASURE</b>	<p><b>V-6a: Paint Towers with Appropriate Colors.</b> Transmission towers that are visible from sensitive viewing locations (in this case Towers 3/19 through 4/24) shall be painted appropriate colors to most effectively blend the structures with the visible background landscape. Structures that are visible from more than one sensitive viewing location may require more than one color if backdrops are substantially different when viewed from different vantage points. For example, Tower 3/21 would typically have a light colored sky background when viewed from southbound I-280 north of the structure. Therefore, the north-facing structural surfaces should be painted a neutral, non-reflecting gray color. However, Tower 3/21 is backdropped by green, vegetated landforms when viewed from the southbound I-280 vista point (as illustrated in Figure D.3-6B) and much of northbound I-280 south of the structure. Therefore, south- and east-facing structural surfaces should be painted a neutral green color to more effectively blend with the background vegetation. PG&amp;E shall submit a tower paint plan demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.</p>
<b>Location</b>	The Proposed Project from Tower 3/19 to Tower 4/24.
<b>Monitoring / Reporting Action</b>	CPUC to verify project redesign prior to construction and implementation <u>in the field</u> during and following construction.
<b>Effectiveness Criteria</b>	Transmission towers will more effectively blend with their backdrops when viewed from I-280 southbound vista point, I-280, and Cañada Road.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm redesign prior to project construction. Confirm implementation during and after project construction.



Table D.3-3. Mitigation Monitoring Program – Visual Resources

<b>IMPACT V-8</b>	<b>Increased Structure Size Causing a Noticeable Increase in Structure Skylining, Industrial Character, and Visual Contrast When Viewed from Key Viewpoint 7 – I-280 Southbound at SR 92 (Class II).</b>
<b>MITIGATION MEASURE</b>	<b>V-8a: Relocate Towers between 2/18 and 4/25.</b> Relocate the proposed route between Tower 2/18 and Tower 4/25 as shown in Figure D.3-8C. This reroute would reduce the visual prominence of the Proposed Project on views from southbound and northbound I-280 and northbound Cañada Road. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.
<b>Location</b>	The Proposed Project from Tower 2/18 to Tower 4/25.
<b>Monitoring / Reporting Action</b>	CPUC to verify project redesign prior to construction and implementation <u>in the field</u> following construction.
<b>Effectiveness Criteria</b>	The visibility and structural prominence of transmission tower 3/22 will be noticeably reduced.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm redesign prior to project construction. Confirm implementation after project construction.
<b>IMPACT V-9</b>	<b>Increased Structure Size Causing a Noticeable Increase In Structure Skylining, Industrial Character, and Visual Contrast When Viewed from Lexington Avenue (Class I).</b>
<b>MITIGATION MEASURE</b>	<b>V-9a: Eliminate Towers 5/29, 5/31 and 6/33.</b> Eliminate Towers 5/29, 5/31 and 6/33 by increasing span distances between towers to reduce the number of towers between Tower 5/28 and Tower 6/34 (as shown in Figure D.3-9c). If necessary, tower heights can be increased (up to a maximum of 30% additional height) to facilitate longer spans without creating a significant visual impact. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction. <u>If the tower eliminations cannot be accomplished as described above without exceeding the 30% height increase limitation, then Tower 5/29 shall be eliminated, Towers 5/31 and 6/33 shall be retained, and the visibility of Towers 5/30 and 5/31 shall be reduced as illustrated in Figure D.3-9c (Rev). This shall be accomplished by taking the following steps: (a) Move Tower 5/28 northward (still staying adjacent to the trees) but no further than the revised location shown in Visual Resources Figure D.3-9c (Rev); (b) Increase the height of Tower 5/28 as necessary but not exceeding the 30% height increase threshold; (c) Move Tower 5/31 slightly south as shown in Visual Resources Figure D.3-9c (Rev) to increase structural screening by the adjacent trees; and (d) Increase the height of Tower 5/31 the minimum extent necessary to facilitate the span to Tower 5/32 without exceeding the 30% height limitation. During the preparation of final construction plans, PG&amp;E shall consult with the visual specialist to ensure that the objectives of this measure are achieved.</u> <b>APM 8.11: Lexington Avenue Area.</b> In order to reduce the proposed replacement towers' overall visual impact as seen from the residential area near Lexington Avenue, PG&E shall install site-specific plantings within the utility easement or off-site at key locations in order to partially screen views of the replacement poles. Plantings may include street trees along Lexington Avenue or at specific residential properties. Selected plant material shall be appropriate to the local landscape setting and shall conform to local/County planning and design guidelines.
<b>Location</b>	Mitigation Measure V-9a applies to the Proposed Project from Tower 5/28 to Tower 6/34 and APM 8.11 is applicable from Mileposts 5.3 to 6.0.
<b>Monitoring / Reporting Action</b>	CPUC to verify project redesign prior to construction and implementation following construction.

**Table D.3-3. Mitigation Monitoring Program – Visual Resources**

<b>Effectiveness Criteria</b>	The visibility and structural prominence of the route segment between Towers 5/28 and 6/34 will be substantially reduced when viewed from Lexington Avenue.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm redesign prior to project construction. Confirm implementation after project construction.

**IMPACT V-10 Increased Structure Size Causing a Noticeable Increase in Structure Skylining, Industrial Character, and View Blockage When Viewed from Crystal Springs Rest Area, Junipero Serra Monument (Class II).**

**MITIGATION MEASURE V-10a: Eliminate Tower 7/40.** Eliminate Tower 7/40 by spanning directly from Tower 7/39 to Tower 7/41 as shown in Figure D.3-10c. If necessary, the location of Tower 7/39 can be adjusted and the heights of Towers 7/39 and 7/41 can be increased (not to exceed 30%). If necessary, tower heights can be increased (up to 30% additional height) to facilitate a longer span.

If the elimination of Tower 7/40 cannot be accomplished as described above without exceeding the 30% height limitation, then the following steps are to be taken to enable the elimination of Tower 7/40, the visual impact would be significant: (a) Move Tower 7/39 north as shown in Visual Resources Figure D.3-10c (Rev); (b) Increase the height of Tower 7/39 the minimum amount necessary not to exceed an additional 30%; (c) Move Tower 7/41 to the south as shown in Visual Resources Figure D.3-10c (Rev); (d) If necessary to further reduce the height of Tower 7/41, increase the height of Tower 7/43 (Tower 7/42 will also be eliminated); and (e) If necessary to further reduce the height of Tower 7/41, shift Tower 7/43 to the south to reduce the span distance between Towers 7/43 and 7/41. Also, if necessary to facilitate the relocation of Tower 7/39 to the north, the height of Tower 6/38 can be increased a maximum of 10%. During the preparation of final construction plans, PG&E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.

<b>Location</b>	The Proposed Project from Tower 7/39 to Tower 7/41.
<b>Monitoring / Reporting Action</b>	CPUC to verify project redesign prior to construction and implementation following construction.
<b>Effectiveness Criteria</b>	The visibility and structural prominence of the route segment between Towers 7/39 and 7/41 will be substantially reduced when viewed from the Junipero Serra Monument.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm redesign prior to project construction. Confirm implementation after project construction.

**IMPACT V-12 Noticeable Increase in Structural Prominence, Visual Contrast, and View Blockage When Viewed from Black Mountain Road (Class I).**

**MITIGATION MEASURE V-12a: Eliminate Towers 7/42, 7/45, and 8/47.** Eliminate Towers 7/42, 7/45, and 8/47 by increasing span distances between proposed Towers 7/41 and 8/48. If necessary, modify the location of Towers 7/41, 7/43, 7/44, and 8/48 (as shown in Figure D.3-12c) to reduce the number of towers between Towers 7/41 and 8/48 from eight to five. If necessary, tower heights can be increased (up to a maximum of 30% additional height) to facilitate longer spans. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction. If the elimination of Towers 7/42, 7/45, and 8/47 cannot be accomplished as described above without exceeding the 30% height limitation, then the following steps are to be taken, as illustrated in Figure D.3-12c (Rev): (a) Increase the height of Tower 7/43 slightly to offset the tower's shift in location to the south as described in Mitigation Measure V-10a; (b) Increase the height of Tower 7/44 to enable the reduction in height of Tower 7/46 (and to further facilitate the slight relocation of Tower 7/43 to the south as described in Mitigation Measure V-10a); and (c) If

Table D.3-3. Mitigation Monitoring Program – Visual Resources

	<p><u>necessary, increase the height of Tower 8/48 to further reduce the height of Tower 7/46. During the preparation of final construction plans, PG&amp;E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&amp;E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.</u></p> <p><b>APM 8.10: Black Mountain Road Area.</b> In order to reduce the proposed replacement poles' visibility as seen from the residential area near Black Mountain Road in Hillsborough, PG&amp;E shall use replacement poles with a narrower diameter "slim profile" design to minimize their apparent mass. In addition, PG&amp;E shall, in consultation with the SFPUC Resource Management staff, install site-specific plantings within the utility easement or off-site at key locations in order to partially screen views of the replacement poles. Plant material shall be appropriate to the local landscape setting and shall conform to Hillsborough planning and design guidelines.</p>
Location	Mitigation Measure V-12a is applicable to the Proposed Project from Tower 7/41 to Tower 7/48 and APM 8.10 applies from Milepost 7.5 to 8.5.
Monitoring / Reporting Action	CPUC to verify project redesign prior to construction and implementation following construction.
Effectiveness Criteria	Structural prominence, visual contrast, and view blockage will be substantially reduced between Towers 7/41 and 8/48 when viewed from Black Mountain Road.
Responsible Agency	CPUC
Timing	Confirm redesign prior to project construction. Confirm implementation after project construction.
<b>IMPACT V-13</b>	<b>Noticeable Increase in Structural Prominence, Visual Contrast, and View Blockage When Viewed from Sky View Drive and Loma Vista Drive (Class I).</b>
<b>MITIGATION MEASURE</b>	<p><b>V-13a: Eliminate Towers 10/64 and 10/66.</b> Eliminate Towers 10/64 and 10/66 by increasing span distances between proposed Towers 10/63 and 10/67 (as shown in Figure D.3-12d). If necessary, modify the location and heights (not to exceed 30%) of Towers 10/63, 10/65, and 10/67 to reduce the number of towers between Towers 10/63 and 10/67 from five to three. If necessary, tower heights can be increased (up to 30% additional height) to facilitate longer spans (of about 1,100 to 1,400 feet). <u>PG&amp;E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction. If the elimination of Towers 10/64 and 10/66 cannot be accomplished as described above without exceeding the 30% height limitation, then the following steps are to be taken to enable the elimination of Towers 10/64 and 10/66, as illustrated in Figure D.3-12d (Rev): (a) Increase the height of Tower 10/63 (not to exceed the 30% threshold) to enable a reduction in the height of Tower 10/65; (b) If necessary, shift the location of Tower 10/67 to the south as shown on Figure D.3-12d (Rev) in order to reduce the height of Tower 10/65; and (c) If necessary, a 35% increase in height of Tower 10/67 (5% over the 30% threshold) would be acceptable to meet the objectives of this measure. During the preparation of final construction plans, PG&amp;E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&amp;E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.</u></p>
Location	The Proposed Project from Tower 10/63 to Tower 10/67.
Monitoring / Reporting Action	CPUC to verify project redesign prior to construction and implementation following construction.
Effectiveness Criteria	Structural prominence, visual contrast, and view blockage will be substantially reduced between Towers 10/63 and 10/67 when viewed from Sky View Drive and Loma Vista Drive.
Responsible Agency	CPUC
Timing	Confirm redesign prior to project construction. Confirm implementation after project construction.

Table D.3-3. Mitigation Monitoring Program – Visual Resources

<b>IMPACT V-14</b>	<b>Noticeable Increase in Structural Prominence and Visual Contrast When Viewed from Crystal Springs Golf Course (Class II).</b>
<b>MITIGATION MEASURE</b>	<p><b>V-14a: Eliminate Towers 9/56, 9/58, and 9/60.</b> Eliminate Towers 9/56, 9/58, and 9/60 by increasing span distances between proposed Towers 9/55 and 9/61, as shown in Figure D.3-13c. If necessary, modify the location and heights (not to exceed 30%) of Towers 9/55, 9/57, 9/59, and 9/61 to increase conductor spans, thereby reducing the number of towers between Towers 9/55 and 9/61 from seven to four. PG&amp;E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction. <u>If the elimination of Towers 9/56, 9/58 and 9/60 cannot be accomplished as described above without exceeding the 30% height limitation, then the following steps are to be taken to enable the elimination of Towers 9/56, 9/58 and 9/60 as illustrated in Figure D.3-13c (Rev): (a) Increase the height of Tower 9/59 to enable a reduction in the height of Tower 9/57, and (b) If necessary, increase the height of Tower 9/55 to enable the reduction in height of Tower 9/57. During the preparation of final construction plans, PG&amp;E shall consult with the visual specialist to ensure that the objectives of this measure are achieved.</u></p> <p><b>APM 8.9: Crystal Springs Golf Course.</b> A tubular steel pole rather than a lattice tower shall be installed at the edge of the putting green and parking lot in Crystal Springs Golf Course.</p>
<b>Location</b>	Mitigation Measure V-14a applies to proposed Towers 9/56, 9/58, and 9/60 and APM 8.9 is applicable to proposed Tower 9/55.
<b>Monitoring / Reporting Action</b>	CPUC to verify project redesign prior to construction and implementation following construction.
<b>Effectiveness Criteria</b>	Structural prominence and visual contrast will be substantially reduced between Towers 9/55 and 9/61 when viewed from Crystal Springs Golf Course.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm redesign prior to project construction. Confirm implementation after project construction.
<b>IMPACT V-15</b>	<b>Substantial Increase in Structural Prominence and Visual Contrast When Viewed from Northbound I-280 (Class II).</b>
<b>MITIGATION MEASURE</b>	<p><b>V-15a: Reduce Views of Proposed Tower 10/69</b><del>Relocate the proposed Tower 10/68 to 69.</del> If the Proposed Project is approved, Towers 10/63 to 11/70 shall be relocated to the west of the I-280 Freeway as illustrated in Figure Ap.1-3b (Partial Underground Alternative, Detail of West of I-280 Segment). <del>Relocate the proposed Tower 10/68-69 span to the north as shown in Figure D.3-14C. This reroute would eliminate the visual prominence of Tower 10/69 on views from northbound I-280. PG&amp;E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction. If the reroute cannot be accomplished, the visual impact would be significant.</del></p>
<b>Location</b>	The Proposed Project from Tower 10/68 to Tower 11/70.
<b>Monitoring / Reporting Action</b>	CPUC to verify project redesign prior to construction and implementation following construction.
<b>Effectiveness Criteria</b>	Structural prominence and visual contrast associated with the Tower 10/68-69 span would be substantially reduced when viewed from northbound and southbound I-280.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm redesign prior to project construction. Confirm implementation after project construction.

Table D.3-3. Mitigation Monitoring Program – Visual Resources

<b>MITIGATION MEASURE</b>	<b>V-15b: Use Steel Poles from Tower 10/69 to 14/95.</b> PG&E shall use tubular steel poles rather than the proposed lattice steel structures from Tower 10/69 to Tower 14/95. This measure would simplify structural appearance, enable the structures to better blend in with adjacent trees and landscape, and reduce structural contrast. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.
<b>Location</b>	The Proposed Project from Tower 1069 to Tower 14/95.
<b>Monitoring / Reporting Action</b>	CPUC to verify project redesign prior to construction and implementation following construction.
<b>Effectiveness Criteria</b>	Structural prominence and visual contrast associated with the Tower 10/68-69 span would be substantially reduced when viewed from northbound and southbound I-280.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm redesign prior to project construction. Confirm implementation after project construction.

**IMPACT V-16 Noticeable Increase in Structural Prominence and View Blockage When Viewed from the Sawyer Camp Trail at San Andreas Lake Dam (Class II).**

<b>MITIGATION MEASURE</b>	<p><b>V-16a: Relocate from Sawyer Camp Trail.</b> Relocate proposed Tower 11/75 to the east as shown in Figure D.3-15C. This reroute would eliminate the visual prominence of Tower 11/75 on views from the Sawyer Camp Trail at San Andreas Lake Dam. As part of this reroute, also eliminate Tower 12/76 by spanning from the revised Tower 11/75 location directly to Tower 12/77. If necessary, the height of Towers 11/75 and <del>4412/77</del> can be increased (up to 30% additional height) to facilitate the longer conductor span. <del>PG&amp;E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.</del></p> <p><del>If the reroute cannot be accomplished as described above without exceeding the 30% height increase limitation, the reroute can be modified as follows and as illustrated in Figure D.3-15C (Rev): (a) Tower 11/74 is to be moved to the east side of the current 60 kV Tower location rather than the west side as presently proposed (the purpose of this move is to reposition the tower to a slightly less prominent position when viewed from the San Andreas Lake Dam); (b) Tower 11/75 is to be relocated to a position south of the presently proposed location shown in Visual Resources Figure D.3-15C (the purpose of this move is to shorten the span distance between Towers 11/74 and 11/75 in order to enable a reduction in height of Tower 11/74); and (c) Retain Tower 11/76 in order to eliminate the height increase for Tower 12/77. During the preparation of final construction plans, PG&amp;E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&amp;E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.</del></p> <p><b>APM 8.5: Watershed Trails.</b> In order to reduce the Project's potential to appear visually prominent as seen from the San Francisco Watershed public recreation trails PG&amp;E shall, in consultation with the San Francisco PUC Resource Management staff, install site-specific native tree and/or shrub plantings at key locations between the trails and those proposed replacement towers located in the immediate foreground of views from trails to partially screen views of the Project. Selected plant material shall be appropriate to the Watershed setting and shall conform to the SFPUC Watershed vegetation management policies.</p>
<b>Location</b>	Mitigation Measure V-16a is applicable to the Proposed Project from Tower 11/75 to Tower 12/77 and APM 8.5 is applicable to Milepost 3.3 to 4.3 and 11.0 to 14.1.
<b>Monitoring / Reporting Action</b>	CPUC to verify project redesign prior to construction and implementation following construction.
<b>Effectiveness Criteria</b>	Structural prominence and view blockage associated with the Tower 11/75-12/77 route segment would be substantially reduced when viewed from the Sawyer Camp Trail at San Andreas Lake Dam.

Table D.3-3. Mitigation Monitoring Program – Visual Resources

<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm redesign prior to project construction. Confirm implementation after project construction.
<b>IMPACT V-17</b>	<b>Noticeable Increase in Structural Prominence and Skylining When Viewed from the San Andreas Trail Near Tower 84 (Class II).</b>
<b>MITIGATION MEASURE</b>	<b>V-17a: Relocate Tower 13/84.</b> Relocate proposed Tower 13/84 to the south as shown in Figure D.3-16C. This reroute would eliminate the visual prominence of Tower 13/84 on northbound views of San Andreas Lake from the San Andreas Trail. If necessary, tower heights can be increased (up to 30% additional height) to facilitate longer conductor spans and the relocation of Tower 84. PG&E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.
<b>Location</b>	The Proposed Project from Tower 13/83 to Tower 13/85.
<b>Monitoring / Reporting Action</b>	CPUC to verify project redesign prior to construction and implementation following construction.
<b>Effectiveness Criteria</b>	Structural prominence and view blockage associated with Tower 13/84 would be significantly reduced when viewed from the San Andreas Trail.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm redesign prior to project construction. Confirm implementation after project construction.
<b>MITIGATION MEASURE</b>	<b>V-17b: Eliminate Proposed Towers 12/80 and 12/82.</b> Eliminate proposed Towers 12/80 and 12/82 and span directly from <b>Towers</b> 12/79 to 12/81 and 12/81 to 13/83, as shown in Figure D.3-16c. This measure would further reduce the visual impact of the Proposed Project on the San Andreas Trail. If necessary, tower heights can be increased (up to 30% additional height) to facilitate longer conductor spans. <del>PG&amp;E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.</del> <u>If the relocation of Tower 13/84 cannot be accomplished, the visual impact would be significant. If the elimination of Towers 12/80 and 12/82 cannot be accomplished as described above without exceeding the 30% height increase limitation, the measure can be modified as follows and as illustrated in Figure D.3-16c (Rev): (a) Retain Tower 12/80, thereby eliminating the need to increase the height of Tower 12/79 and reducing the height increase of Tower 12/81; and (b) If necessary, increase the height of Tower 13/83 to facilitate the reduction in heights of both Towers 12/81 and 13/84. PG&amp;E shall consult with the visual specialist to ensure that the objectives of this measure are achieved. PG&amp;E shall submit final construction plans demonstrating compliance with this measure to the CPUC for review and approval at least 60 days prior to the start of construction.</u>
<b>Location</b>	The Proposed Project from Tower 12/79 to Tower 13/83.
<b>Monitoring / Reporting Action</b>	CPUC to verify project redesign prior to construction and implementation following construction.
<b>Effectiveness Criteria</b>	Structural prominence and view blockage associated with the Tower 12/79-13/83 route segment would be substantially reduced when viewed from the San Andreas Trail.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm redesign prior to project construction. Confirm implementation after project construction.



Table D.3-3. Mitigation Monitoring Program – Visual Resources

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~~achieve effective screening of specific views for each transition facility location as follows: within five years of completion of construction. The vegetation plan shall include simulations or drawings of the station or structures after 5 years and after 10 years.~~

- **San Bruno Avenue:** Views from San Bruno Avenue, Skyline Boulevard, Sky Crest Shopping Center, and Glenview Drive.
- **West of Skyline:** Views from Skyline Boulevard, and the San Andreas Trail.
- **Sneath Lane:** Views from Skyline Boulevard and Sneath Lane.
- **PG&E Option 1B Alternative, Overhead Crossing of Crystal Springs Dam, Southern:** Views from Skyline Boulevard and I-280.
- **PG&E Option 1B Alternative, Overhead Crossing of Crystal Springs Dam, Northern:** Views from Skyline Boulevard, Crystal Springs Road, and I-280.
- **PG&E Option 1B Alternative, Modified Overhead Crossing of Crystal Springs Dam:** Views from Crystal Springs Road.
- **Partial Underground Alternative, Ralston Substation:** Views from I-280 and Residences along Allegheny Way.
- **Partial Underground Alternative, Transition Station Near Tower 6/36:** Views from I-280, Skyline Boulevard, and Residences along Laurel Hill Drive.
- **Partial Underground Alternative, Transition Tower Near Tower 7/39:** Views from I-280, Skyline Boulevard, and Residences along Lakeview Drive.
- **Partial Underground Alternative, Transition Tower at Tower 8/50:** Views from I-280, Skyline Boulevard, and Residences along Darrell Road.
- **Glenview Drive Alternative Transition Tower:** Views from Glenview Drive and the residences immediately north of the site.
- **Trousdale Drive Alternative Transition Tower:** Views from adjacent watershed access roads.
- **Golf Course Drive Transition Station Alternative:** Priority shall be given to protection of views from I-280, the I-280 Hayne Road off-ramp, Skyline Boulevard, and Golf Course Drive. If this alternative is approved, at least 120 days prior to construction of the transition station, PG&E shall provide to the CPUC for review and approval a detailed Screening Plan for the Golf Course Drive Transition Station. The plan must include the retention of all existing trees that presently border the site, as well as additional strategic plantings to fill in gaps and view corridors between existing trees, as well as strategic plantings in new areas including: (a) along the west side of southbound I-280 in the immediate vicinity of the site, (b) along the west side of the I-280 southbound Hayne Road off-ramp, and (c) along the east side of Golf Course Drive extending from the entry gate far enough north to intercept all sightlines of southbound motorists on Golf Course Drive. The Screening Plan shall incorporate field guidance from the visual specialist to ensure that the Plan achieves the objectives contained in this measure.

**APM 8.13: Transition Station Landscaping (Milepost 14.7).** In addition to the transition station landscaping proposed as part of the Project, PG&E shall install informal tree and shrub grouping intermittently along the west and north sides of the block wall in order to visually integrate the facility with the surrounding landscape and to screen potential views from Skyline Boulevard and the existing residences located to the north. Plant material shall be appropriate to the local landscape setting, shall conform to San Bruno planning and design guidelines and shall be consistent with CPUC and PG&E regulatory and technical requirements for landscaping in proximity to transmission lines.

(Where APM 8.13 conflicts with Mitigation Measure V-20a, Mitigation Measure V-20a is to be implemented.)

**AMP 8.12: Substation and Transition Station Glare.** To minimize potential glare from the substations and the transition station, proposed structures at these sites, including fences, will be painted or finished with a non-reflective treatment.

**AMP 8.12A: Substation and Transition Station Lighting.** Exterior lighting at substations will include the use of non-glare light bulbs. Lighting fixtures will be located and designed to avoid casting light or glare on off-site locations.



**Table D.3-3. Mitigation Monitoring Program – Visual Resources**

<b>Location</b>	The Proposed Project at the transition station site and all Alternative Transition Station sites
<b>Monitoring / Reporting Action</b>	CPUC to verify project redesign prior to construction and implementation following construction.
<b>Effectiveness Criteria</b>	Structural prominence, visual contrast, and view blockage associated with the transition station would be reduced to the extent feasible when viewed from San Bruno Avenue, the Sky Crest Center, Skyline Boulevard, and the San Andreas Trail.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm redesign prior to project construction. Confirm implementation after project construction.
<b>MITIGATION MEASURE</b>	<b>V-20b: Transition Station Design Evaluation.</b> <u>This measure shall be implemented if the proposed transition station, the Sneath Lane Alternative Transition Station, or the West of Skyline Transition Station are approved.</u> At least 120 days prior to construction of the transition station, PG&E shall provide to the CPUC for review and approval a detailed Transition Station Design Evaluation that provides the rationale for and against constructing a transition pole instead of a transition station and sufficient analysis, including visual simulations, to enable third-party evaluation of the two transition approaches. <u>The relative value of biological habitat lost and visual impact created with each approach shall be considered in detail.</u>
<b>Location</b>	The Proposed Project at the transition station site and all Alternative Transition Station sites
<b>Monitoring / Reporting Action</b>	CPUC to evaluate project design and select transition approach prior to construction and <u>verify</u> implementation following construction.
<b>Effectiveness Criteria</b>	Structural prominence, visual contrast, and view blockage associated with the transition station would be reduced to the extent feasible when viewed from San Bruno Avenue, the Sky Crest Center, Skyline Boulevard, and the San Andreas Trail.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Select transition approach prior to project construction. Confirm implementation after project construction.
<b>IMPACT V-21</b>	<b>Visual Impact of Modifications to Substations, Switchyards, and Taps (Class III).</b>
<b>MITIGATION MEASURE</b>	<b>APM 8.14: Jefferson Substation.</b> PG&E shall install informal native plantings in order to reduce the visibility of the proposed modifications at the Jefferson Substation as seen from recreation trails and from Cañada Road. Plant material shall be appropriate to the local and Edgewood Park landscape setting and shall be consistent with CPUC and PG&E regulatory and technical requirements for landscaping in proximity to transmission lines. Recontouring of disturbed, graded areas will be implemented to provide a natural appearing landform upon completion of construction. <b>APMs 8.12 and 8.12A</b> (above)
<b>Location</b>	All substations and transition stations associated with the project.
<b>Monitoring / Reporting Action</b>	CPUC to verify project redesign prior to construction and implementation following construction.
<b>Effectiveness Criteria</b>	Visual impacts would be reduced to the extent feasible.
<b>Responsible Agency</b>	CPUC
<b>Timing</b>	Confirm project design prior to project construction. Confirm implementation after project construction.

Table D.3-3. Mitigation Monitoring Program – Visual Resources

PG&E Route Option 1B - Underground Alternative	
<b>IMPACT V-24</b>	<b>Introduction of Complex Industrial Features into Landscapes Generally Natural in Appearance and Lacking Such Features (Class I).</b>
<b>MITIGATION MEASURE</b>	<u>V-24a: Relocate Transition Tower 7/39. If the Partial Underground Alternative is approved, Tower 7/39 shall be relocated approximately 100 feet north of its proposed location (as defined by PG&amp;E), and it is at least 100 feet from the property line of any residence. The specific location shall be defined based on consultation with a visual resources specialist. PG&amp;E shall submit a proposed location and design for the transition structure for CPUC review and approval at least 60 days prior to the start of construction.</u>
<b>Location</b>	<u>Tower 7/39, north of San Mateo Creek.</u>
<b>Monitoring / Reporting Action</b>	<u>CPUC to verify project redesign prior to construction and implementation following construction.</u>
<b>Effectiveness Criteria</b>	<u>Structural prominence, visual contrast, and industrial character associated with the lower structural components of the transition station would be minimized to the extent possible when viewed from public viewing locations.</u>
<b>Responsible Agency</b>	<u>CPUC</u>
<b>Timing</b>	<u>Confirm redesign prior to project construction. Confirm implementation after project construction.</u>
West of Skyline Transition Station with all Underground Route Options	
<b>IMPACT V-27</b>	<b>Introduction of Complex Industrial Features into the Landscape Near Tower 93 (Class II).</b>
<b>MITIGATION MEASURE</b>	<u>V-27a: <b>West of Skyline</b> Transition Station Siting Study. At least 120 days prior to construction of the transition station, PG&amp;E shall provide to the CPUC for review and approval a detailed Transition Station Siting Study that details the analyses conducted to determine the least visually impacting location for the West of Skyline Boulevard Transition Station. The Study shall also provide the rationale for and against constructing a transition pole instead of a transition station and sufficient analysis, including visual simulations, to enable third-party evaluation of the two transition approaches..</u>
<b>Location</b>	<u>The alternative transition station site in the vicinity of proposed Tower 14/93.</u>
<b>Monitoring / Reporting Action</b>	<u>CPUC to evaluate project design and select transition approach prior to construction and <b>verify</b> implementation following construction.</u>
<b>Effectiveness Criteria</b>	<u>Structural prominence, visual contrast, and view blockage associated with the transition station/structures would be reduced to the extent feasible.</u>
<b>Responsible Agency</b>	<u>CPUC</u>
<b>Timing</b>	<u>Select transition approach prior to project construction. Confirm implementation after project construction.</u>