

## 5. Initial Study

### 5.1 Aesthetics

AESTHETICS		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

#### 5.1.1 Setting

Aesthetics, as addressed in the California Environmental Quality Act (CEQA), refers to visual considerations in the physical environment. Aesthetics analysis, or visual resource analysis, is a process to systematically assess anticipated visible change in the physical environment and a viewer's response to that change. This analysis describes the existing character of the project area landscape, existing views of the project area from various vantage points on the ground, visual characteristics of the Proposed Project itself, and the landscape changes that would result from the construction and operation of the Proposed Project, as seen from various vantage points.

The project would include a new Potrero 230 kV Switchyard and a 230 kV transmission line connecting the new Potrero Switchyard and the existing Embarcadero Substation. The approximately 3.5-mile long transmission line would include: 2.5 miles of submarine cable installed in the bay; 0.4 miles of horizontal directional drilling between the bay and onshore transition points at either end; and 0.6 miles of underground installation in paved areas, including Spear and Folsom Streets in the Rincon Hill area and 23rd Street east of Illinois Street in the Central Waterfront.

The proposed Potrero 230 kV Switchyard would be near the eastern waterfront of San Francisco, in a predominantly industrial setting. Two regional freeways, Interstate 280 (I-280) and Highway 101, are 0.33 miles and 1 mile west of the site, respectively. A grid of local streets provides access to the project vicinity and the site. The site is approximately 20 feet above sea level and the topography in the immediate area is relatively level. Potrero Hill, a residential and commercial district approximately 0.5 miles to the west, west of an elevated portion of I-280, rises to an elevation of about 300 feet. The Dogpatch neighborhood of San Francisco is located on the flats between Potrero Hill and the project site. This neighborhood includes the Dogpatch Historic District, bounded by Third Street and Indiana Street on the east and west and Mariposa Street and 23rd Street on the north and south. Existing buildings, structures, and vegetation screen the site from the historic district.

The proposed switchyard site would front on 23rd Street, between 400 and 600 feet east of Illinois Street. Approximately 150 feet past the site, 23rd Street dead-ends. There is no public access beyond this point, including to the waterfront. The site is approximately 400 feet from the nearest point of the San Francisco Bay shoreline, Warm Water Cove. In the immediate site vicinity, industrial and warehouse

facilities and utility structures are the dominant urban landscape features. These include the existing Potrero 115 kV Switchyard, the decommissioned former Potrero Power Plant, several overhead power lines, and the recently constructed Trans Bay Cable (TBC) facility directly across 23rd Street from the proposed Potrero 230 kV Switchyard site.

The Port of San Francisco's Pier 70 is northeast of the site. The area immediately adjacent to the site is characterized by industrial activities and appurtenances, including cranes, large buildings, walls, fencing, and port facilities. However, the area west of Third Street, 1.5 blocks west of the site, consists of residential, commercial, and public uses. Third Street is a light rail corridor with transit stations and street-scape amenities. The corridor provides a major local connection between San Francisco's downtown and its southeastern neighborhoods. Residential development comprised of both new construction and renovated and re-purposed industrial buildings occurs along the corridor and to the west.

### Existing Landscape Setting and Viewer Characteristics

This section discusses the existing visual character and quality of the area; existing visual quality in the area; and viewer concern and viewer exposure to the Proposed Project, leading to a rating of overall visual sensitivity. Also discussed are the existing sources of light and glare within the project area.

**Regional Context.** The Proposed Project would be entirely within the City and County of San Francisco. The proposed transmission line between Embarcadero Substation and Potrero Switchyard would be located underground on land and underwater in the bay. The northern terminus of the Proposed Project would be Embarcadero Substation, at the southeast corner of Fremont and Folsom Streets in the Rincon Hill area. The northern portion of the transmission line would be underground in the paved Folsom Street and Spear Street rights-of-way, to a northern horizontal directional drilling (HDD) transition point in Spear Street, from where a bore would be drilled to the water. Land uses along Folsom and Spear Streets are a combination of commercial and residential uses, including apartment and condominium towers, parking lots, and the Transbay Temporary Terminal.

In the bay, the proposed transmission line would run more than a quarter-mile offshore from Piers 28 and 30/32, before returning to land via a second HDD transition at the extension of 23rd Street. The new Potrero 230 kV Switchyard would be constructed on the north side of 23rd Street within the former Potrero Power Plant site now owned by [NRG Potrero LLC, formerly](#) GenOn Energy, Inc. Adjacent land uses on the south side of 23rd Street are a freight and logistics company (DHL) facility at 401 23rd Street, a storage facility, and the high voltage direct current (HVDC) converter station for the Trans Bay Cable.

**Local Project Viewshed and Key Observation Points.** A project viewshed is the area from which the Proposed Project would be visible. For purposes of analysis, viewing distances or zones in a viewshed can be described as *foreground* (generally within 0.25 to 0.5 miles of the viewer), *middleground* (between the foreground and 3 to 5-miles distant), and *background* (beyond 3 to 5 miles). Because of the built nature of its surroundings and the location of nearby structures, the Potrero Switchyard site would generally be visible in the immediate foreground (0–300 feet) and intermittently visible in the foreground (300 feet to 0.5 miles) distance zones.

For the purpose of this analysis, the potential effect on foreground viewshed conditions is emphasized, particularly those areas within 0.25 miles of the switchyard site. Beyond 0.5 miles, the site would be only intermittently visible as a component within an existing built environment.

View distances are restricted by intervening structures, landforms, and vegetation. From many locations within the area surrounding the site, views of the proposed switchyard facilities will be partially or fully screened by intervening structures.

As described below, the Proposed Project would be visible from some locations along nearby public roads, including I-280, and the chief viewers would be motorists. Illinois Street between 17th Street and Cesar Chavez is a part of the Bay Trail route and is identified as *unimproved (on street) no bike lanes or sidewalks* (Bay Trail, 2011). Cyclists constitute a small viewer group, but both trail hikers and cyclists may become a larger group in the future. Project visibility from residential areas on Third Street (approximately 700 feet west of the site) and farther west would be limited by intervening buildings and street trees.

Current nighttime lighting in the project area includes street lighting on roadways and lighting at the existing Potrero Switchyard and on other facilities.

Figure 5.1-1 shows the location of the switchyard site relative to its surroundings and indicates the eight viewpoints for the photographs provided in Figure 5.1-2. Figure 5.1-2 consists of four sheets presenting photographs from these various viewpoints. There are two images per sheet.

- Photograph 1, approximately 150 feet east of the proposed switchyard site, is a view looking northwest from 23rd Street toward Illinois Street. The project site is located behind the chain link fence in front of which vehicles are parked. A tall red-brick building (Station A of the former power plant) on the right and a light metal building on the left generally frame the site on its east and west sides, respectively. A pole-mounted overhead light is within the project site (PG&E, 2012 pg. 3.1-7). Street trees and a multi-story building on Illinois Street as well as components of the existing Potrero Switchyard are partially visible behind the new 230 kV Switchyard site. Potrero Hill appears beyond these, including trees and residences on the hillside. This viewpoint is used in Figure 5.1-3 to compare existing and simulated proposed conditions.
- Photograph 2, a view looking northeast from the intersection of 23rd and Illinois Streets, shows part of the existing Potrero 115 kV Switchyard, including an existing metal building and a gray concrete wall bordering the sidewalk in the foreground (PG&E, 2012 pg. 3.1-12). This is a view looking toward the site in the opposite direction of Photograph 1. Beyond the existing switchyard, the proposed switchyard site is visible along 23rd Street, with a multi-story brick industrial building (Station A) marking the eastern edge of the site and serving as a backdrop. At the far right in the photo, the stack of the former Potrero Power Plant is silhouetted against the sky. A portion of the landscaped Trans Bay Cable facility perimeter wall also is visible. This viewpoint is used in Figure 5.1-4 to compare existing and simulated proposed conditions.
- Photograph 3 is a view looking toward the project site from the crosswalk at 23rd and Third Streets, one block farther west along 23rd Street from the Photograph 2 viewpoint. This is an active pedestrian and bicycle area (PG&E, 2012 pg. 3.1-12). This view depicts the existing Potrero 115 kV Switchyard and the proposed switchyard site located in the vacant area in front of the red brick building (Station A) and just past the grey metal building. This view includes utility poles, a light colored low-rise storage building situated along the south (right) side of 23rd Street, the stack of the former Potrero Power Plant, and a view toward the East Bay in the background, at the end of the extension of 23rd Street.
- Photograph 4 is a view toward the site from approximately 0.4 miles west on 23rd Street at Pennsylvania Avenue, just west of I-280 (PG&E, 2012 pg. 3.1-12). The bridge structure carrying I-280 is visible at the top edge of the photograph. From this slightly elevated vantage point, the switchyard site is discernible but largely screened by intervening buildings. The stack of the former Potrero Power Plant

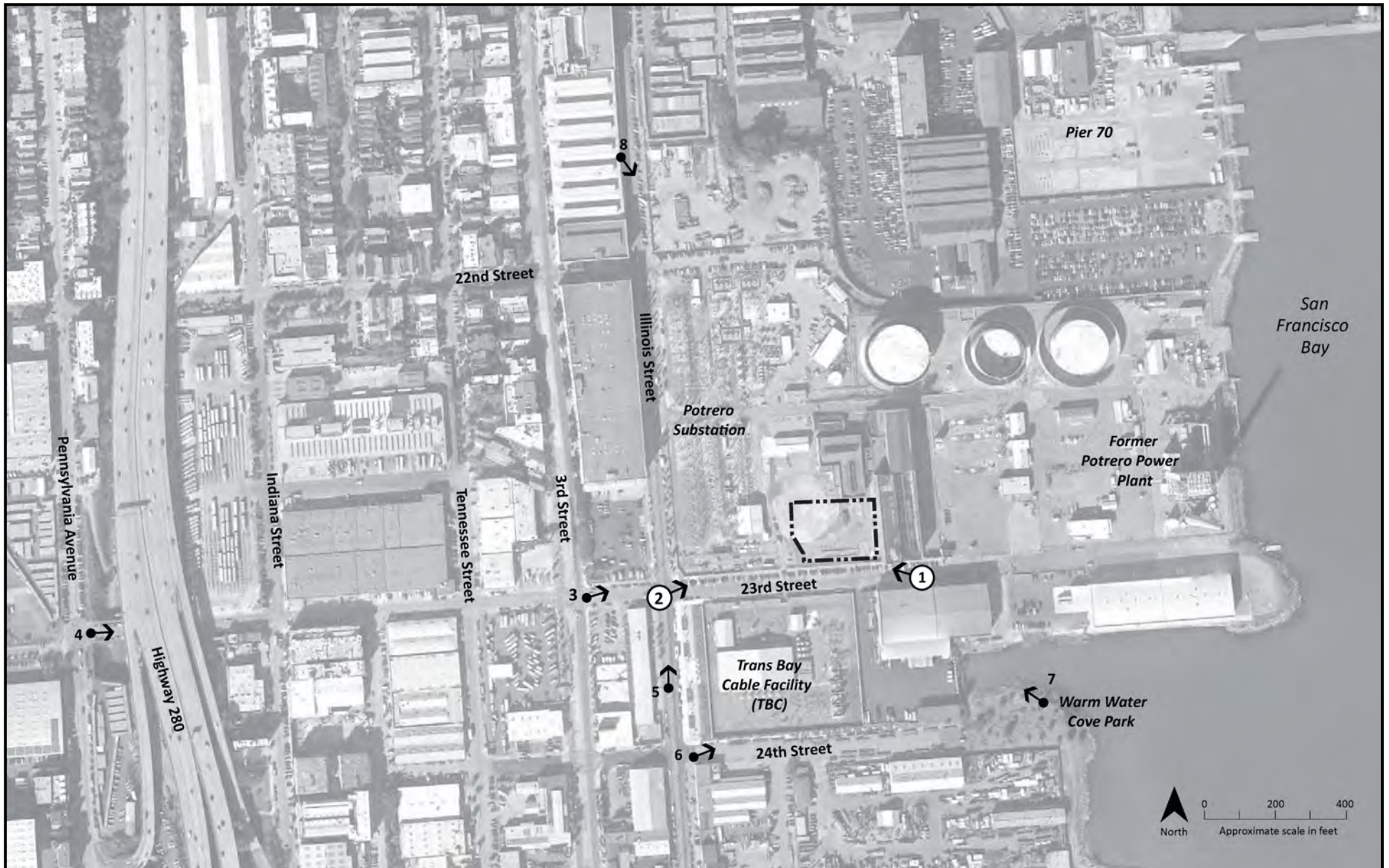
is visible in the background, beyond the tall Station A building. The upper reaches of the new switchyard building would be visible at approximately the height of the darker red color on the wall of Station A.

- Photograph 5, looking north on Illinois Street between 23rd and 24th Streets, shows development along both sides of Illinois Street (PG&E, 2012 pg. 3.1-12). On the right, existing Potrero 115 kV Switchyard is a prominent feature, with its equipment seen above a light gray wall. In the immediate foreground are landscape improvements in front of the Trans Bay Cable facility and a portion of the screening wall parallel to the street. Multi-story buildings appear on the left. Utility poles, street trees, and a distant high-rise building are also visible against the sky. This portion of Illinois Street connects to the Bay Trail shoreline access.
- Photograph 6 shows the view from Illinois Street looking east along 24th Street in the direction of the waterfront (PG&E, 2012 pg. 3.1-12). This location is one block south of the project site. Views toward PG&E's switchyard site are completely blocked by the masonry walls that surround the Trans Bay Cable facility. Poles and structures within the facility and the more distant stack of the former Potrero Power Plant appear silhouetted against the sky. Trees at Warm Water Cove Park are visible at the end of 24th Street. A very small green and yellow sign that denotes Bay Trail shoreline access can be seen on the right side of the street, near the chain link fence.
- Photograph 7 was taken from the waterfront path in Warm Water Cove Park, approximately 600 feet southeast of the site (PG&E, 2012 pg. 3.1-12). It illustrates that views toward the project site are completely screened by the multi-story white DHL warehouse building on 23rd Street, across from the site. The site is west of the red-brick Station A building, partially visible beyond the DHL building. Open, panoramic views of the bay are available to the east of this location along the shoreline path; however, buildings, tanks, utility towers, and various other industrial structures dominate views in other directions.
- Photograph 8, taken from Illinois Street north of 22nd Street, is a view looking southeast toward the proposed switchyard site (PG&E, 2012 pg. 3.1-12). Opaque fences and intervening buildings at or near the existing Potrero Switchyard generally screen views of the project from this location. Utility structures, including lattice towers and portions of the existing Potrero Switchyard, are silhouetted against the sky. On the left side of this view, Irish Hill, a partially vegetated landform with exposed rock, is visible in the foreground and, beyond this, part of the former Potrero Power Plant's red stack also appears along the skyline.

## Sensitive Viewers

There are three primary types of potentially affected viewers within the project viewshed: motorists, residents, and recreational users.

Motorists, the most numerous viewers in the area, include people traveling on Illinois and 23rd Streets and on Third Street, a major north-south road and local transportation corridor. Because of intervening buildings, walls, and vegetation, motorist views toward the project from Third Street are limited. While the traffic volumes on Third Street are relatively high, fewer vehicles use other public streets near the project, although Illinois Street is a north-south connector route (SFMTA, 2013) along the waterfront. 23rd Street dead-ends east of the existing Potrero Switchyard and the proposed Potrero 230 kV Switchyard site and has limited traffic, mostly trucks involved at work sites, including the former Potrero Power Plant and the DHL facility, and occasional customers at the DHL facility (PG&E, 2012 pg. 3.1-12). Affected motorist views are generally brief, typically lasting less than a few minutes. Viewer sensitivity is considered low to moderate.



Source: PG&E, 2012.

- 1 → Viewpoint Location and Direction
- ② → Simulation Viewpoint Location and Direction
- ⋯ New Potrero 230 kV Switchyard Site

**Figure 5.1-1**  
**Photograph Viewpoint Locations**

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1. 23rd Street east of Illinois Street looking west\*



2. 23rd Street at Illinois Street looking northeast\*

\*Simulation Viewpoint

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3. 23rd Street at 3rd Street looking northeast



4. 23rd Street at Pennsylvania Avenue looking east

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5. Illinois Street near 24th Street looking north



6. 24th Street at Illinois Street looking northeast

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7. Warm Water Cove Park looking northwest



8. Illinois Street north of 22nd Street looking southeast

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The second viewer group includes nearby residents. The immediate site vicinity is primarily industrial and commercial. The closest residences are west of Third Street, approximately 700 feet from the site; however, from this area views toward the site are obstructed by existing structures and street trees. Residences located approximately 0.5 miles away, on the eastern slope of Potrero Hill, may have distant views of the project. From these residences, the project would appear within the context of existing industrial and utility development, including the existing Potrero Switchyard, former power plant, screening wall, tanks, and the Trans Bay Cable facility. Views of the bay would not be affected. Residential views tend to be long duration, and the sensitivity of this viewer group is considered moderate to high.

The third viewer group includes recreational users, including cyclists and pedestrians using Illinois Street and the Bay Trail. Viewers using Illinois Street would have a close view of the proposed Potrero 230 kV Switchyard, but project components would appear within the context of industrial and utility development including the existing Potrero Switchyard and the Trans Bay Cable facility. The view toward the site from the nearest public open space, Warm Water Cove Park, is blocked by existing buildings. The potential future expansion of Warm Water Cove Park to the end of 23rd Street could potentially increase the number of viewers in this group; however, direct views would be blocked by the existing DHL facility and the red-brick Station A building. Recreational views in the project area would tend to be brief or moderate in duration, and the sensitivity of this viewer group is considered moderate to high.

## Applicable Regulations, Plans, and Standards

### *Federal*

There are no federal regulations applicable to the project related to aesthetic or visual resources.

### *State*

**California Scenic Highway Program.** California's Scenic Highways Program, a provision of the Streets and Highways Code (S&HC), was established by the Legislature in 1963 to preserve and enhance the natural beauty of California. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a state scenic highway changes from eligible to officially designated (OD) when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (Caltrans) for scenic highway approval, and receives the designation from Caltrans (PG&E, 2012). A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways (Caltrans, 2007).

No designated state scenic routes are located near the project. Highway 80, an eligible state scenic highway, lies directly over the HDD portion of the underground route. Highway 280, an eligible state scenic highway, lies 0.33 miles west of the proposed Potrero Switchyard site; however, intervening buildings screen most views of the site from this roadway and available views would be fleeting and seen in the context of the surrounding industrial and commercial buildings and structures.

**San Francisco Bay Conservation and Development Commission (BCDC), San Francisco Waterfront Special Area Plan.** The McAteer-Petris Act of 1965 established the BCDC in part to regulate filling, dredging, and land use and to improve public access along San Francisco Bay. It regulates nearly all work on land within 100 feet of the bay shoreline. BCDC also is the designated state coastal management agency for the San Francisco Bay segment of the California coastal zone. The proposed switchyard site would be located outside BCDC jurisdiction, but the provisions from BCDC's San Francisco Waterfront Special Area Plan (SFWSAP) (BCDC, 1975) that relate to visual resources along the San Francisco shoreline are considered in this discussion.

7. View Corridors. Important Bay views along The Embarcadero and level inland streets should be preserved and improved. Minor encroachment into the view corridors from level inland streets may be permitted under the following conditions:

- a. where the encroaching element has a distinct maritime character, is separated from the shoreline by water, and adds variety to the views along the waterfront;
- b. where minor structures (such as kiosks) are desirable to provide public amenities contributing to a continuity of interest and activity along the waterfront;
- c. where essential maritime facilities cannot reasonably be located and designed to avoid view blockage. (p. 11)

**Port of San Francisco.** The Port of San Francisco is responsible for 7.5 linear miles of waterfront, piers, and adjacent seawall lots in San Francisco. In the project area, the Port has jurisdiction over the bay and certain onshore lands in the vicinity of Pier 70 and Warm Water Cove. Because the existing switchyard site is located in proximity to the Port's Southern Waterfront Subarea Plan, and a portion of the proposed switchyard site would be within the Port's jurisdiction, this discussion considers relevant Port policies, including the Pier 70 Preferred Master Plan.

**Port of San Francisco, Waterfront Land Use Plan.** The Waterfront Land Use Plan contains general policies to expand visual and physical public access to the bay. In particular, the plan states the following:

10. Major developments on waterside properties should highlight maritime features and incorporate public access improvements which maximize visual connections (and physical contact, to the extent possible) with the water as further described in the Waterfront Design & Access Element. (p. 68)

**Port of San Francisco, Waterfront Design and Access Element.** The Waterfront Design and Access Element provides additional policies for the design of new development, including policies on public access, views, and historic preservation. Appendix A of the Plan, Street View Inventory, shows existing and proposed views of the bay from waterfront streets. It recommends that streets that connect to the waterfront should have views of the bay, historic structures, or architecture that provides a waterfront identity. This map does not show 23rd Street as having an existing or proposed bay view.

**Port of San Francisco, Pier 70 Preferred Master Plan.** Pier 70 is located northeast of Potrero Switchyard. As part of development at Pier 70, the Port intends to create Slipways Park, a new waterfront open space due east of Irish Hill at the eastern edge of the pier. The park may include jetties or piers for pedestrian access to the waterfront and public access from the extension of 20th and 22nd Streets. Additionally, the plan envisions future public shoreline connections from Slipways Park south to Warm Water Cove Park. The proposed switchyard site would be outside the planning area for the Pier 70 Preferred Master Plan. Existing infrastructure along the shoreline blocks direct views of the Potrero Switchyard site.

### **Local**

The Proposed Project would be located in areas cooperatively administered by the City and County of San Francisco, the Port of San Francisco, and the BCDC. The San Francisco General Plan contains ten Area Plans that set specific policies and guidelines for certain neighborhoods in San Francisco. The project area is located within the area described in the Central Waterfront Plan. Additionally, provisions in the Recreation and Open Space Element of the General Plan pertain to visual resources.

**San Francisco General Plan, Central Waterfront Area Plan.** The Central Waterfront Area encompasses Mariposa Street south to Islais Creek and Interstate 280 east to the bay (San Francisco Planning Depart-



ment, 2008). The Built Form and Streets and Open Space sections of the plan contain provisions pertaining to visual resources in the area, as follows:

### 3. Built Form

Objective 3.1. Promote an urban form that reinforces the central waterfront's distinctive place in the city's larger form and strengthens its physical fabric and character.

Policy 3.1.1. Adopt heights that are appropriate for the Central Waterfront's location in the city, the prevailing street and block pattern, and the anticipated land uses, while producing buildings compatible with the neighborhood's character.

Policy 3.1.2. Development should step down in height as it approaches the Bay to reinforce the city's natural topography and to encourage an active and public waterfront.

Policy 3.1.5. Respect public view corridors.

Policy 3.2.3. Minimize the visual impact of parking.

Policy 3.2.6. Sidewalks abutting new developments should be constructed in accordance with locally appropriate guidelines based on established best practices in streetscape design.

The height of the proposed Potrero 230 kV Switchyard is relatively low and will not interfere with views toward the waterfront. In addition, the project's appearance is in keeping with the primarily industrial character of the immediate vicinity. Once constructed, the project will not block views down 23rd Street toward the waterfront, nor will it result in an increase in permanent parking that would be visible to the public.

### 5. Streets and Open Space

This element describes the expansion of Warm Water Cove and the development of Crane Cove Park, to be located east of 18th Street on Pier 70. Additionally, as part of a long-term plan for the former Potrero Power Plant site and Pier 70, the area surrounding Irish Hill also is identified as a potential park site. Currently, this area is owned by PG&E and is used for company operations. The plan describes 22nd Street and 24th Street as future green connector streets to waterfront open space and 23rd Street as an improved pedestrian connection.

**San Francisco 49-Mile Scenic Drive.** I-280 and a portion of Indiana Street, near the project, are part of San Francisco's 49-mile Scenic Drive. The drive was developed in 1938 as part of the Golden Gate International Exposition. San Francisco Travel, a private, not-for-profit marketing organization promotes the drive, which is marked by signs maintained by the San Francisco Municipal Transportation Agency. Although the drive is recognized for its aesthetic value, no specific City plans or policies address scenic resources for this portion of the roadway corridor.

### Applicant Proposed Measures

PG&E proposes to implement measures during the design, construction, and operation of the Proposed Project to ensure it would occur with minimal environmental impacts in a manner consistent with applicable rules and regulations. Applicant Proposed Measures (APMs) are considered part of the Proposed Project in the evaluation of environmental impacts. CPUC approval would be based upon PG&E adhering to the Proposed Project as described in this document, including the project description and the APMs, as well as any adopted mitigation measures identified by this Initial Study. Table 5.1-1 identifies the APM applicable to aesthetics.

**Table 5.1-1. Applicant Proposed Measures (APMs) Related to Aesthetics**

APM Number	Issue Area
	<b>Aesthetics</b>
APM AE-1	<b>Nighttime Lighting to Minimize Potential Visual Impacts.</b> The new switchyard may include outdoor lighting for safety and security purposes. Design and layout for new outdoor lighting at the switchyard will incorporate measures, such as use of non-glare or hooded fixtures and directional lighting, to reduce spillover into areas outside the switchyard site and minimize the visibility of lighting from offsite locations. The new lighting will be operated only as needed and will be designed to avoid casting light or glare offsite.

## 5.1.2 Environmental Impacts and Mitigation Measures

### Visual Impact Assessment Methodology

When viewing a particular landscape, people may differ in their responses to that landscape and any proposed visual changes. These are based on their values and their familiarity, concern, or expectations for that landscape and its scenic quality. Because each person’s attachment to and valuation of a particular landscape is unique, visual changes affect viewers differently. Nevertheless, generalizations can be made about viewer sensitivity to scenic quality and visual change. For example, recreationists, pedestrians, and people driving for pleasure are expected to have a high concern for scenery, visual quality, and landscape character. By comparison, persons commuting regularly through the same landscape generally have a moderate concern for scenery, while people working at, say, industrial sites generally have a lower concern for scenic quality or changes to existing landscape character. The visual sensitivity of a landscape to change is affected by the viewing distances from which it is seen. The visual sensitivity of a landscape also is affected by the speed at which a person is traveling through the landscape (e.g., high speed on a highway, low speed walking, or stationary at a residence).

The visual analysis is based on review of information provided by PG&E, including project maps and drawings, aerial and ground level photographs of the project area, local planning documents, and computer-generated visual simulations. Field observations and photography were conducted by PG&E consultants in May and June 2012 to document existing visual conditions in the project area and to identify potentially affected sensitive viewing locations. Visual conditions were verified in the field by CPUC in January 2013.

This visual assessment employs methods based, in part, on those adopted by the Federal Highway Administration (FHWA) and other accepted visual analysis techniques. The impact analysis describes change to existing visual resources and assesses viewer response to that change. Central to this assessment is an evaluation of representative views from which the project would be visible to the public. To document the visual change that would occur, visual simulations presented before and after images showing the project from key representative public viewpoints. The visual impact assessment is based on evaluation of the changes to the existing visual resources that would result from construction and operation of the project. These changes were assessed, in part, by evaluating the after views and comparing them to the existing visual environment.

The analysis used a Visual Sensitivity/Visual Change methodology to assess the visual effects of the Proposed Project on the existing landscape. The methodology includes a characterization of the visual sensitivity of the existing landscape, the characteristics of existing visual changes occurring and apparent in the landscape, and the characteristics of the Proposed Project.

Visual sensitivity consists of three components: visual quality, viewer concern, and viewer exposure. The description of *visual quality* notes the existing built structures and natural landscape features that contribute to overall visual quality. *Viewer concern* can be described as the personal expectations for the landscape that are held by the viewing public. Viewer concern often is reflected in public policy documents that identify landscapes of special concern or roadways with special scenic status, e.g., scenic highways. *Viewer exposure* also affects a landscape's overall visual sensitivity. Landscapes that have very low viewer exposure, based on landscape visibility, viewing distance, number of people who view the landscape, or duration of time that the landscape can be viewed, will tend to be less sensitive to overall visual change in the context of human experience of visual impacts. Landscapes with higher viewer exposure are more sensitive to overall visual changes. Overall visual sensitivity is rated on a scale of Low to Moderate to High.

Project-induced *visual change* could result from aboveground facilities, vegetation removal, landform modification, size or scale of project components relative to existing landscape characteristics, and the placement of project components relative to developed features. The experience of visual change also can be affected by the degree of available screening by vegetation, landforms, and/or structures; distance from the observers; atmospheric conditions; and angle of view. Visual change describes the degree of actual visible change expected as a result of the project. The fundamental elements of visual change include *visual contrast*, *visual dominance*, and *scenic view obstruction*. *Visual contrast* refers to visual discrepancies of form, line, color, or texture of the project against the existing landscape. *Visual dominance* refers to the degree to which this contrast would demand the attention of casual viewers. *Scenic view obstruction* refers to the degree to which the project would block or intrude upon scenic view corridors, particularly those identified in public policies. Overall visual change is rated on a scale of Low to Moderate to High.

In addition, the project is evaluated for conformance with applicable local plans and policies. Adopted expressions of local public policy pertaining to visual resources are given great weight in determining both visual quality and viewer concern.

The determination of which aesthetic changes cross a threshold of "substantial adverse effect" or degradation is based upon the criteria described above and in Table 5.1-2, Visual Impact Significance Criteria. This table was used primarily as a consistency check, as determinations of visual sensitivity and visual change were based primarily on analyst experience and site-specific circumstances.

Implicit in this rating methodology is the acknowledgment that for a visual impact to be considered significant two conditions generally must 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 elements or characteristics of the project tends toward the high extreme, leading to a substantial reduction in visual quality.

**Table 5.1-2. Visual Impact Significance Criteria**

Visual Sensitivity	Visual Change				
	Low	Low to Moderate	Moderate	Moderate to High	High
Low	No impact <sup>1</sup>	No impact	Less Than Significant <sup>2</sup>	Less Than Significant	Less Than Significant
Low to Moderate	No impact	Less Than Significant	Less Than Significant	Less Than Significant	Less Than Significant with Mitigation Incorporated <sup>3</sup>
Moderate	Less Than Significant	Less Than Significant	Less Than Significant	Less Than Significant with Mitigation Incorporated	Less Than Significant with Mitigation Incorporated
Moderate to High	Less Than Significant	Less Than Significant	Less Than Significant with Mitigation Incorporated	Less Than Significant with Mitigation Incorporated	Potentially Significant Impact <sup>4</sup>
High	Less Than Significant	Less Than Significant with Mitigation Incorporated	Less Than Significant with Mitigation Incorporated	Potentially Significant Impact <sup>4</sup>	Potentially Significant Impact

1 - No Impact – Impacts may or may not be perceptible but are considered minor in the context of existing landscape characteristics and view opportunity.

2 - Less Than Significant – Impacts are perceived as negative but do not exceed environmental thresholds.

3 - Less Than Significant with Mitigation Incorporated – Impacts are perceived as negative and may exceed environmental thresholds depending on project and site-specific circumstances, but are Less Than Significant with mitigation incorporated.

4 - Potentially Significant Impact – 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.

## Project Components

The impact assessment methodology takes into account all components of the Proposed Project, including construction. Although the proposed transmission line components would be underground or underwater, installation would involve various pieces of equipment. Installation of the submarine cable would involve a barge pulled into position by two commercial tugboats. The submarine installation is expected to take approximately two weeks. The vessels would be similar in nature to the vessel traffic already existing on the bay. Underground installation of the transmission line on land and in transition between land and bay bottom would require cut and fill excavation work in existing roadways and use of a HDD site to bore between the end of the excavation and the submarine cable. The landside work would require the temporary placement of equipment, tanks, safety barriers, and similar appurtenances in the landscape during the construction phase. Once installed, the transmission line would be underwater or underground accessible by manholes and vaults in the city streets. Because of this, aesthetic impacts of the installation of the submarine and underground cable are not discussed further, as the use of various equipment or marine vessels would be short-term and common to existing vessel traffic and construction equipment in the area.

The primary permanent visible component of the project would be the new 230 kV switchyard building, proposed to be adjacent to the existing Potrero Switchyard. This new facility would be located within the existing fenceline of the property and would be housed in an estimated 8,500-square-foot building with basement. The approximate dimensions of the major project components are listed in Table 5.1-3. The 23rd Street frontage of the site would include an entry gates on both the east and west sides of the facility and an architectural building façade or 10-foot-tall masonry wall that would partially screen outdoor components. To convey power between the 115 kV and 230 kV switchyards, six single-phase tubular steel termination poles would be installed. These would be approximately 10 feet high, with insulated terminals to a total height of approximately 17 feet. The new poles would likely be at the south end of the existing 115 kV bus, near 23rd Street. The height of the existing 115 kV bus structure is approximately 34 feet. These poles would be a minor element in the project and would blend with the existing bus equipment on-site.

**Table 5.1-3. Approximate Dimensions of Major Project Components**

Components (Number of Elements)	Height (feet)	Length (feet)	Width (feet)
Equipment Building (1)	<del>40</del> 34	136	62
230/115 kV Transformer (1)	28	35	23
Shunt reactor (1)	23	42	16

Source: PG&E, 2012.

The new switchyard would potentially include outdoor lighting for safety and security purposes. Like the existing lighting at the switchyard and substation, the new lighting would be operated only for safety and security purposes. New project lighting would be designed to avoid casting light or glare offsite.

### Visual Simulations

Visual simulations were prepared to illustrate “before and after” visual conditions in the Proposed Project area, as seen from the two simulation viewpoints (VP) shown on Figure 5.1-1. These simulations are presented in Figures 5.1-3 and 5.1-4; each of these figures consists of two full-page images designated “a” and “b,” with the existing “before” views shown in the “a” figure and the “after” visual simulations in the “b” figure. Of 8 viewpoints considered (see Figures 5.1-1 and 5.1-2), these two Viewpoints (VPs) were identified as representative of views seen by the greatest number of affected viewers and/or from sensitive locations, such as nearby streets.

**VP-1: Close-range View from 23rd Street.** Figure 5.1-3a is a close-range view of the proposed Potrero 230 kV Switchyard site as seen from 23rd Street, approximately 150 feet east of the site. In this view, the site lies beyond the chain link fence near the center of the view. A pole-mounted overhead light is near the corner of the site and beyond it a metal building and portions of the existing 115 kV Potrero Switchyard are visible. In the immediate foreground, an overhead awning attached to the structure located along the south side of the street frames the upper left corner of this view. From this location, on the right, a multi-story brick building (Station A) screens views to the north. Street trees along Third Street, a multi-story warehouse, and trees and residences on Potrero Hill appear in the background.

Figure 5.1-3b shows the same view with a simulation of how the wall and structure preliminarily proposed to be constructed would appear. Planned landscape vegetation along the wall is shown. Based on further stakeholder consultation and design work by PG&E since the Proponent’s Environmental Assessment was submitted, PG&E may construct the GIS facility with an architectural façade open to 23rd Street, rather than a perimeter wall as shown in the figures herein. Such a design would be expected to further reduce the already less-than-significant visual impacts associated with the Proposed Project.

*Viewer Exposure. Low.* Because 23rd Street dead-ends just east of this vantage point, a limited number of people experience the view from this vantage point. If future public open space or shoreline access improvements occur, the number of viewers could increase but direct views from the waterfront would be blocked by existing structures.

*Viewer Concern. Low to Moderate.* Travelers on 23rd Street already experience the industrial nature of the existing Potrero Switchyard, the new Trans Bay Cable facility, and the former Potrero Power Plant. The visual quality of this viewpoint is industrial in nature. Therefore, travelers can be expected to have low-to-moderate concern for visual impacts resulting from the new switchyard. If future public open space or shoreline access improvements occur, the viewer concerns could increase.

*Visual Quality: Low to Moderate.* The primary focal points of this landscape are the existing Potrero 115 kV Switchyard, the new Trans Bay Cable facility, warehousing, and the former Potrero Power Plant which is a brick building (Station A) with a historical feel. A group of tall trees in the background and housing on Potrero Hill provide some interest in the distance from this Viewpoint. All of these visual attributes combine to create a visual quality that is low-to-moderate.

*Overall Visual Sensitivity: Low to Moderate.* For travelers on 23rd Street and from KVP-1 specifically, the low viewer exposure, low-to-moderate viewer concern, and low-to-moderate visual quality lead to a low-to-moderate overall visual sensitivity of the visual setting and viewing characteristics of the Potrero Switchyard site.

*Visual Change: Low to Moderate.* The visual simulation portrays the proposed Potrero 230 kV Switchyard based on preliminary design, including the southern façade of the building that encloses most of the individual switchyard elements, and the masonry screening wall and entry gate from 23rd Street (Figure 5.1-3b). As noted above, PG&E has consulted with stakeholders and recently refined its design for the switchyard, including adding the potential for two entry gates from 23rd Street, as well as allowing an architectural façade on the GIS building to serve as the south-facing perimeter rather than the masonry wall. These minor design revisions would further reduce the less-than-significant visual change impacts associated with the Proposed Project.

From this view location, the new building would partially screen views of the existing Potrero Switchyard and the multi-story warehouse beyond. The scale and appearance of the new building at the switchyard would be compatible with the existing visual character found in the project vicinity. In addition, the new wall would screen the lower portions of the new switchyard. Given the presence of nearby existing utility and industrial facilities, the introduction of the new 230 kV Potrero Switchyard would not have a substantial effect on overall character or composition of the urban landscape in this area.

Referring to Table 5.1-2, Visual Impact Significance Criteria, the overall visual change seen from 23rd Street would be low-to-moderate and in the context of the existing landscape's low-to-moderate visual sensitivity, the proposed Potrero 230 kV Switchyard would result in a less-than-significant impact to aesthetic or visual resources.

**VP-2: View from 23rd Street at Illinois Street.** Figure 5.1-4a provides a wide-angle view from 23rd Street at Illinois Street looking northeast toward the site. This vantage point provides a close-range, relatively unobstructed view of the existing 115 kV Potrero Switchyard in the left half of the image and the proposed new switchyard site beyond it, as seen by a passing motorist, pedestrian, or cyclist. From this location, the project site is visible along 23rd Street, beyond the visible elements of the existing 115 kV Potrero Switchyard, including its steel power structures, metal building, and concrete wall. A multi-story brick building (Station A) lies approximately at the eastern edge of the project site. Silhouetted on the far right is the stack of the former Potrero Power Plant, with a portion of the wall of the Trans Bay Cable facility visible in the foreground.



Existing View from 23rd Street east of Illinois Street looking west (VP 1)

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Visual Simulation of Proposed Project (VP 1)

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View from 23rd Street at Illinois Street looking northeast (VP 2)

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Visual Simulation of Proposed Project (VP 2)

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*Viewer Exposure. Low to Moderate.* Because there is no screening provided by landforms or vegetation from this viewpoint, the proposed 230 kV Potrero Switchyard would be highly visible in the landscape as seen from this location. Illinois Street is a two-way, two-lane local road that has low-to-medium traffic. Therefore, the number of viewers on Illinois Street is considered low to moderate. For motorists, the duration of view would be brief because of the speed of travel and intervening built features including the existing Potrero Switchyard. Cyclist and pedestrian views of the new Switchyard would be longer in duration than motorists, but relatively few people would be expected to travel on Illinois Street by foot or bicycle. Based on the combination of all these factors and conditions, the overall viewer exposure for VP-2 is considered low to moderate.

*Viewer Concern. Low to Moderate.* Travelers on Illinois Street already experience the industrial nature of the existing 115 kV Potrero Switchyard, the former Potrero Power Plant, and the new Trans Bay Cable facility on a regular basis. The existing visual quality of this viewpoint is industrial in nature. Therefore, travelers can be expected to have low-to-moderate concern for visual impacts resulting from the new switchyard.

*Visual Quality: Low to Moderate.* The primary focal points of this landscape are the 115 kV Potrero Switchyard, the large former Potrero Power Plant building, and the Trans Bay Cable facility. Views of the bay are restricted due to intervening structures. All of these visual attributes combine to create a visual quality that is low-to-moderate.

*Overall Visual Sensitivity: Low to Moderate.* For travelers on 23rd Street and from VP-2 specifically, the low to moderate viewer exposure, low to moderate viewer concern, and low to moderate visual quality lead to a low to moderate overall visual sensitivity of the visual setting and viewing characteristics of the 230 kV Potrero Switchyard site.

*Visual Change: Low to Moderate.* The visual simulation from this location (Figure 5.1-4b) shows the preliminary design of the new Potrero Switchyard, including the new equipment building and screening wall with planting and an entry gate along 23rd Street. As noted above, PG&E has consulted with stakeholders and recently refined its design for the switchyard, including adding the potential for two entry gates from 23rd Street, as well as allowing an architectural façade on the GIS building to serve as the south-facing perimeter rather than the masonry wall. These minor design revisions would further reduce the less-than-significant visual change impacts associated with the Proposed Project. In addition, a small upper portion of the new shunt reactor would be slightly visible beyond the switchyard wall. As seen from this intersection, the new switchyard building and the nearby existing metal building would be similar in terms of scale and form. As such, the overall appearance of the proposed switchyard building would be compatible with the existing visual character found in the project vicinity. The project-related changes are incremental effects that would not substantially alter existing visual conditions in the area, including views toward the waterfront.

Referring to Table 5.1-2, Visual Impact Significance Criteria, the overall visual change seen from 23rd Street would be low-to-moderate and in the context of the existing landscape's low-to-moderate visual sensitivity.

## **Aesthetics Impacts**

### **a. Would the project have a substantial adverse effect on a scenic vista?**

*NO IMPACT.* For purposes of this evaluation, a scenic vista is defined as a distant public view along or through an opening or corridor that is recognized and valued for its scenic quality. Panoramic views of the San Francisco Bay from the Warm Water Cove Park represent a scenic vista. Panoramic views of the

San Francisco Bay would also be available from the expanded Warm Water Cove north portion, just east of the former Potrero Power Plant (Central Waterfront Area Plan, Eastern Neighborhoods Streets and Open Space Concept, 2008). The proposed transmission line would be located approximately 600 feet northwest of the Warm Water Cove Park but would not be visible from this location, as illustrated in Figure 5.1-2d (Photograph 7). Additionally, the project would not be directly visible from the Warm Water Cove expansion due to intervening structures, including the former Potrero Power Plant and existing DHL facility. Therefore, the project would not have an adverse effect on a scenic vista.

**b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?**

*NO IMPACT.* No designated state scenic routes are located in the immediate vicinity of the Proposed Project. Highway I-80, an eligible state scenic highway lies directly over the proposed northern HDD transition area and underground route. Portions of the construction along Spear Street may be momentarily visible from vehicles on I-80 during construction. Following construction, there would be no potential to damage scenic resources and no visual impact at this location.

Highway I-280, an eligible state scenic highway, lies 0.33 miles west of the proposed Potrero Switchyard site. The proposed switchyard would be partially visible against the backdrop of the former Potrero Power Plant as indicated in Figure 5.1-2b (Photograph 4). Because of the existing industrial infrastructure and intervening structures, the proposed Potrero 230 kV Switchyard would not damage scenic resources from this viewpoint, and there would be no impact at this location.

**c. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?**

*LESS THAN SIGNIFICANT – CONSTRUCTION.* During construction, the Proposed Project would result in temporary impacts that would degrade the existing visual character or quality of the site and surroundings along Folsom Street, Spear Street, and near the Potrero Switchyard. During construction, potential visual impacts would include the presence of workers, temporary structures, construction equipment, and vehicles associated with the installation of the transmission line and switchyard components. Trenching activity would progress at approximately 50 feet per day along the along the onshore segment. Within the four month period of trench excavation and manhole installation along Folsom and Spear Streets, trenching within 100 feet of any single location would be limited in duration to about four days as crews would gradually move along the linear work zone. Installation of the HDD offshore to onshore transition would require work during an 8-month window. Within this window, the drill rig would typically require 13 days per each of three bores, drilled separately, for a total of 39 days of drill rig use in each transition area. At each HDD transition area, the drilling would run up to 6 days per week and 10 hours per day, extending over a period of about 6 to 7 weeks. The underground route and HDD locations would be within public streets adjacent to residential and commercial uses, as shown in Figure 4-8.

As noted in the Project Description (Section 4.11.1), during underground trenching activities the excavated materials would be disposed directly into trucks and removed from the area for off-site disposal. Any water from dewatering would be pumped into containment tanks and tested. Landscaping or vegetation that may need to be cleared would be replaced, and trash and litter would be collected in bins or appropriate containers. After construction is completed, all work areas would be restored to conditions equal or better than pre-construction conditions. Because the visible construction activities would be temporary in nature and the construction sites would be organized and orderly, construction-related visual effects of the underground transmission line and HDD installations would be less than significant.



Construction of the new Potrero 230 kV Switchyard would take approximately 8 months. The switchyard would be located adjacent to a public street (23rd Street) in an urban area where industrial activities typically employ trucks and other equipment. There are no residences or other sensitive visual receptors adjacent to the project site. Because of the presence of industrial activities, the absence of sensitive receptors, and the limited number of affected viewers, temporary construction-related visual effects would be less than significant.

*LESS THAN SIGNIFICANT – OPERATION AND MAINTENANCE.* Once constructed, the entire transmission line would be underground and submarine and would not affect the visual character of its surroundings. The underground portion of the line would be inspected regularly from inside the vaults to avoid disturbing traffic using city streets and would not result in visual effects.

The project would involve the introduction of the new Potrero 230 kV Switchyard on a previously disturbed vacant site adjacent to the existing Potrero Switchyard. This visual change would not be particularly noticeable to the public given the primarily industrial urban setting that includes the Trans Bay Cable facility, former power plant facility, large storage tanks, overhead utility lines, and multi-story industrial and warehouse buildings.

Close-range, unobstructed views of the switchyard would occur from limited places along 23rd Street within a block of the switchyard site; however, as described for the visual simulations depicted in Figures 5.1-3a through 5.1-4b, the project represents an incremental visual change to the urban landscape setting. The project would not obstruct views to the bay. Overall, the changes brought about by the project would not degrade the existing visual character or quality of the landscape. While the Potrero Switchyard building would be visible from some vantage points, the overall visual change would be low-to-moderate and in the context of the existing landscape's low-to-moderate visual sensitivity, the proposed Potrero 230 kV Switchyard would result in a less than significant impact to aesthetic or visual resources.

**d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

*LESS THAN SIGNIFICANT – CONSTRUCTION.* During any night-time construction, portable lighting would be in place. This would be at sites where directional drilling or other night-time work would take place, if required. This is typical of night construction in urban streets. Construction would require lighting focused on the work area for safety and visibility. The effect would be temporary and would be located in an urban environment and primarily industrial setting with existing nighttime lighting in the surrounding area from sources such as street lights and commercial and industrial facility lighting. Therefore, construction impacts would be less than significant.

*LESS THAN SIGNIFICANT – OPERATION AND MAINTENANCE.* The project site would include a neutral-colored concrete perimeter screening wall set back to allow for new landscaping and a new building that would be painted a light neutral color with a non-reflective finish (see Figure 5.1-3b and 5.1-4b for visual simulations of the switchyard building and wall). Additional switchyard structures would have a galvanized finish that weathers to a dull, non-reflective patina. The project design characteristics would minimize potential effect of glare.

The project would be located in an urban, primarily industrial setting with existing overhead lighting adjacent to the site (see Figure 5.1-3) and localized lighting sources such as street lights and commercial and industrial facility lighting. Specifically, the new 230 kV Potrero Switchyard would be located on land owned by [GenOn Energy, Inc.-NRG Potrero LLC](#), and part of the former Potrero Power Plant site. Adjacent land uses include commercial facilities, a storage facility, and the Trans Bay Cable facility. Few sensitive viewers are expected in the immediate area when night lighting would be utilized. Within this

context, new switchyard lighting would represent a minor incremental change to existing nighttime lighting conditions. In addition, PG&E would implement APM AE-1 that would design new outdoor lighting to incorporate measures to reduce spillover into areas outside the switchyard site and minimize the visibility of lighting from offsite locations. APM AE-1 also notes that the new lighting would be operated only as needed. Given the industrial nature of the area and existing night lighting sources in the vicinity of the switchyard, the potential impact of light or glare would be less than significant.