# 8.10 Visual Resources

Visual resources are the natural and man-made features of the environment that can be seen and that contribute to the public's appreciative enjoyment of the environment. Visual resource impacts are generally defined in terms of a project's physical characteristics and potential visibility, and the extent that the project's presence would change the visual character and quality of the environment in which it would be located.

This analysis focuses on whether construction and operation of the Chevron Richmond Refinery Power Plant Replacement Project (PPRP, or the Project) would cause significant impacts to visual resources in the vicinity of the Project, and whether the Project would be in compliance with applicable laws, ordinances, regulations, and standards (LORS). This analysis complies with the California Environmental Quality Act (CEQA), which requires that government agencies make a determination of the potential for visual impacts resulting from a proposed project.

This analysis is organized as follows:

- Section 8.10.1 provides a description of the proposed PPRP.
- Section 8.10.2 presents a description of analysis methodology.
- Section 8.10.3 discusses the applicable LORS.
- Section 8.10.4 provides an assessment of the visual setting of the proposed power plant site and linear facility routes.
- Section 8.10.5 provides an evaluation of the visual impacts of the proposed Project on the existing setting.
- Section 8.10.6 provides an evaluation of the Project's compliance with applicable LORS.
- Section 8.10.7 identifies measures needed to mitigate any potential significant adverse impacts of the proposed Project and/or to achieve compliance with applicable LORS
- Section 8.10.8 lists the source materials referenced in writing this section.

## 8.10.1 Introduction

Chevron is proposing the PPRP to add an additional 60 megawatts (MW) net generation to its existing refinery electrical generation located within Chevron's Richmond Refinery in the City of Richmond (see Figure 1.2-1) in Contra Costa County, California. The proposed PPRP will be integrated into Chevron's plans to meet its growing refinery electrical load, and produce steam to replace an existing boiler plant that is approaching its end of life. The PPRP is a subset of the larger Richmond Refinery Renewal Project that is concurrently undergoing CEQA review by the City of Richmond. The CEC has jurisdiction for only the PPRP portion of the Renewal Project that is the subject of this application.

The PPRP will consist of the following components:

- A nominal 43-MW net, natural gas- or liquid petroleum gas (butane)-fired cogeneration train consisting of one combustion turbine generator (CTG), a refinery fuel gas-fired heat recovery steam generator, 13.8-kV switchgear and ancillary equipment.
- Shutdown of the existing No. 1 power plant refinery steam boilers currently providing steam to the Refinery.
- A 17-MW net extraction, condensing steam turbine generator (STG), an associated cooling tower, and 12-kV switchgear installed as part of the new hydrogen production facility (the remainder of the hydrogen plant is under CEQA review as part of the Renewal Project). The new hydrogen plant will be a net generator of steam for both the STG and the Refinery steam system.
- Reconductoring of approximately 4,000 feet of existing onsite double-circuit overhead 115-kV transmission line to upgrade its ampacity. The reconductoring will reuse existing transmission line structures.
- Adjacent onsite service connections for fuel, reclaimed water, water, wastewater, steam, and electricity to existing piperacks, with the exception of the reconductoring noted above.

The Cogen 3000 portion of the PPRP will occupy approximately 0.5 acre within an existing 5.2-acre cogeneration facility, and the STG and associated equipment ($H_2$-STG) will occupy approximately 0.5 acre within a new 7.9-acre hydrogen plant that will be built as part of the Richmond Refinery Renewal Project. Temporary construction laydown and parking for the PPRP will be provided in various existing laydown areas within the Refinery that are currently used for ongoing maintenance and project laydown. A complete description of the PPRP is provided in Section 2.0.

The locations of the power plant sites, the transmission line that will be reconductored, and the laydown areas are indicated on Figure 8.10-1. As review of this figure indicates, the PPRP will be located well within the existing 2,900-acre Refinery property.

## 8.10.2 Analysis Methodology

This assessment of the proposed Project's potential effects on visual resources was conducted by applying the systematic method for evaluating the potential aesthetic effects of proposed power plant projects that has been adopted by the staff of the CEC. This methodology, which the CEC first applied in its evaluation of the impacts of the Project, is summarized in Appendix 8.10-A.

### 8.10.2.1 Significance Criteria

The following criteria from the CEQA Guidelines were considered in determining whether a visual impact would be significant.

The CEQA Guidelines define a "significant effect" on the environment to mean a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including… objects of historic or aesthetic significance" (C.C.R. tit.14, § 15382).

Appendix G of the CEQA Guidelines, under Aesthetics, lists the following four questions to be addressed regarding whether the potential impacts of a project are significant:

> Would the project have a substantial adverse effect on a scenic vista?
>
> Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway?
>
> Would the project substantially degrade the existing visual character or quality of the site and its surroundings?
>
> Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

#### 8.10.2.2 Evaluation Process

As an initial step in the evaluation process, planning documents (including City of Richmond documents) applicable to the Project area were reviewed to gain insight as to the type of land uses intended for the area, and the guidelines given for the protection or preservation of visual resources. Consideration was then given to the existing visual setting within the Project viewshed, which is defined as the geographical area in which the Project can be seen. Then, an assessment was made of the visual changes that the Project would cause to determine impact significance, following the four CEQA Guidelines checklist questions listed above. Please refer to Appendix 8.10-A for a more complete description of the visual resources evaluation process that was followed.

Potential Project impacts were evaluated using a Key Observation Point (KOP) analysis, among other tools and information sources. Figure 8.10-1 provides a general location map depicting the locations of photographic views of the existing setting. Figures 8.10-2 through 8.10-5 depict existing views of the proposed PPRP site. A single KOP was selected to be representative of the most sensitive locations from which the project would be seen. This KOP is located at an elevated area in Point Richmond, located 0.85 mile from the closest portion of the Project site and 0.3 mile from the Project laydown area. This KOP represents views from the residential area that is closest to the Project site, and from which the site will be most visible because of the neighborhood's elevated location. For this KOP, a photograph documenting existing visual conditions is provided in Figure 8.10-6, along with a photo simulation of the same view as it would appear after Project development.

Once all potential impacts were examined, a determination was made as to whether any impacts would reach a level that would be significant under CEQA's standards, and thus require mitigation beyond that proposed as a part of the initial Project design. Under CEQA, any required mitigation must be specific to an identified impact, and must be feasible.

### 8.10.3 Laws, Ordinances, Regulations, and Standards

#### 8.10.3.1 Federal

The proposed Project is not located on federally administered public lands and therefore is not subject to federal regulations pertaining to visual resources.

#### 8.10.3.2 State

There are no State Scenic Highways within the Project viewshed. Therefore, no state regulations pertaining to scenic resources are applicable to the Project.

#### 8.10.3.3 Local

The proposed power plant and associated linear facilities (recycled water and natural gas supply pipelines, electrical transmission lines, and storm water outfall) are located within the City of Richmond. Therefore, the Project would be subject to local LORS pertaining to the protection and maintenance of visual resources, which are found in the City of Richmond General Plan and Community Development Guidelines. The Project's consistency with specific local goals, policies and guidelines pertaining to visual resources is discussed later in this analysis.

### 8.10.4 Existing Setting

#### 8.10.4.1 Regional Setting

The proposed Project will be developed within the 2,900-acre Chevron Refinery property, which is located in the City of Richmond, along the northeastern shore of San Francisco Bay and the southern shore of San Pablo Bay. The Refinery occupies an expanse of the bay plain that includes marsh and mud flat areas as well as dry lands that have been developed with Refinery facilities. It also encompasses much of the Point San Pablo Peninsula that consists of a northwesterly trending ridge that extends into San Pablo Bay.

The Refinery is part of a corridor of heavy industrial development emphasizing petroleum refining that extends along the eastern shores of San Francisco and San Pablo Bays from Richmond north to Crockett, and along the Carquinez Straits from Crockett eastwards to Benicia and Martinez. In this region, the landscape is characterized by a series of large refinery complexes on bay plain and hillside lands adjacent to the bays and strait. Interspersed in the areas between the refineries are open, natural-appearing wetlands and hillside lands, areas devoted to rail and highway corridors, suburban density housing, and commercial development.

#### 8.10.4.2 Project Site and Vicinity

The areas that will be occupied by the proposed STG, cogeneration facilities, reconductored transmission line, and Project laydown areas are indicated on Figure 8.10-1. These areas all lie well within the Refinery property. The areas where the power generation and laydown facilities will be located consist of flat, bay plain lands that have been previously used for Refinery activities and which are now vacant. They are surrounded by existing Refinery facilities. Photo 1 on Figure 8.10-2 is a view looking eastward across the site of the proposed hydrogen plant site where the STG, cooling tower, and switchgear that are part of the PPRP will be located. Photo 2 on Figure 8.10-3 is a view looking southeastward over the site of the proposed cogeneration facility. Neither of these sites contains features of scenic significance; the existing landscape character is industrial, and the level of visual quality is low.
Photo 3 on Figure 8.10-4 is a view looking north toward the existing transmission line that will be reconductored as a part of the Project. It crosses dry lands used for Refinery operations, as well as a portion of the Refinery wastewater impound area termed the San Pablo Canal that is used for aeration of Refinery wastewaters. Although the presence of the

open waters of the impound aeration pond creates a level of visual interest, overall, the character of this view is industrial. As photos 1, 2, and 3 indicate, the Project facilities will be located in the context of an area now dominated by exposed pipelines, large tanks, tall stacks, and other large-scale Refinery structures. Because access to the Refinery is highly restricted, none of the areas that will be used for Project facilities will be seen at close range by the public.

At nighttime, the Refinery is well lit, with flood lighting used to illuminate general and non-process areas, and focused or spot lighting used in operations areas where higher light intensities are required. Under some circumstances, glare is produced on the Refinery site in places where reflective surfaces are exposed to direct or indirect lighting. Glare is most noticeable during the day, when surface water, metallic or brightly colored surfaces of processing facilities, tanks, pipes, equipment, vehicles and windows may all reflect sunlight. Because of the site's location adjacent to San Francisco and San Pablo Bays, which are themselves expansive open reflective surfaces, the relative importance of glare related to Refinery features is diminished because in many views it is seen in the context of the glare off of the waters of the adjacent bays.

Safety relief valves are used on the Refinery equipment to prevent gas pressures from exceeding equipment design tolerances. Under most circumstances, the gases released through these valves are recovered. In some situations, these gases are routed to one of the Refinery's two flare stacks where they are burned to provide for safe disposal. The extent to which the flares created by these burning gases are visible to the public outside the Refinery varies depending on the size of the flare plume released, the time of day or night the flaring occurs, and the atmospheric conditions at the time.

Because steam is generated and used in many processes at the Refinery, visible steam plumes can sometimes be seen emanating from process stacks and cooling towers. The extent to which these steam plumes are visible depends on air temperature, wind speed and atmospheric humidity, as well as variations in Refinery operations. When plumes are visible, they appear either directly emanating from a process unit stack or cooling tower, or forming a slight distance away from it. These plumes are generally white in color and are composed mostly of small, condensed water droplets. The plume can extend away from its formation point, flowing downwind in the direction of the local wind flow. As it moves, it may spread out both vertically and horizontally, dependent on the meteorological and process unit conditions at the time. Plume formation/dissipation is a continuous process of creation, movement, and destruction and is typically of short duration.

#### 8.10.4.3 Viewing Areas and Key Observation Points

**Potential Project Visibility from Areas Surrounding the Refinery.** Because the proposed Project facilities will be located well within the Chevron Refinery property, and will be screened to a large degree by existing Refinery facilities, the areas from which the Project will be visible to the general public will be somewhat limited. The stacks and other taller elements of the proposed facilities have the greatest potential to be visible from higher elevation areas of Point Richmond, a residential neighborhood located approximately 0.75 mile south of the area where the closest Project facilities will be located. A point along Golden Gate Avenue at the top of the ridge on which the Point Richmond neighborhood is located was selected as KOP 1 to serve as the location of the view used to serve as the basis for evaluation of the

Project's potential visual impacts (Figure 8.10-6). The Project's taller elements will also have the potential to be seen from the elevated segment of Interstate 580 located along the southern edge of the Refinery property. Although this segment of the interstate is slightly closer to the Project sites than KOP 1 in Point Richmond, the Project facilities will be somewhat less visible than from KOP 1 because the freeway is located at a lower elevation that provides a lower angle of view in which more of the proposed power plant's features have the potential to be screened.

Near the northeastern corner of the Refinery property, a spur of the Bay Trail extends westward along Wildcat Creek to an observation area near the Refinery's boundary. The view from this area, which is represented by Photo 4 on Figure 8.10-5, extends across open wetlands toward the built-up portion of the Refinery and the sites where the proposed Project facilities would be located. The locations of this trail spur and the Photo 4 viewpoint are indicated on Figure 8.10-1. As Photo 4 (Figure 8.10-5) indicates, although the foreground zone of this view is open and somewhat natural in appearance, the large-scale and industrial-appearing Refinery facilities dominate the middleground and background areas of the view. The areas in which the Project facilities would be located are substantially screened by existing Refinery facilities.

To some degree, the Project facilities will also be visible from Garrard Boulevard and Richmond Parkway, which border the railroad corridor located to the east of the Refinery property, at distances varying form 1.0 to 1.4 miles from the closest of the proposed facilities. These roadways also serve as the alignment of the Bay Trail through this portion of Richmond. The views from these roadways and this segment of the Bay Trail are represented by Photo 5 on Figure 8.10-5. As this photo indicates, the existing view is of a highly industrialized setting, and the views toward the areas where the Project facilities would be located are substantially screened by rail cars and Refinery equipment. Downtown Richmond and surrounding residential neighborhoods are located to the east of Garrard Boulevard and Richmond Parkway. From these areas, there will be essentially no views toward the proposed Project facilities because of the low angle of view and the screening created by the intervening buildings and trees.

From San Francisco Bay, the Richmond-San Rafael Bridge, and other areas to the west, views toward the Project facilities will be completely screened by the ridge which runs southeast-northwest along the Point San Pablo peninsula.

KOP 1 – Golden Gate Avenue at Clarence Street in Point Richmond. As indicated above, KOP 1 is a viewpoint selected to represent views toward the Project sites from the residential area that is closest to them and from which they would have the greatest degree of potential visibility. This viewpoint is located at the top of the small ridge on which the Point Richmond residential neighborhood is located. This viewpoint is 0.85 mile south of the cogeneration site, on Golden Gate Avenue at the intersection of Clarence Street, at an elevation of 130 feet above mean sea level (msl), which places it 118 to 123 feet higher than the cogeneration plant (located at 7 feet above msl) and steam turbine generator (12 feet above msl) sites. This viewpoint is located on the street in front of a vacant lot, which provides an open vista toward the Refinery in the direction of the areas in which the Project sites are located. This view is generally representative of the views toward the Project sites seen from the residences located along the top of the ridge. In views from residences located further down on the northeastern slope of the ridge, the views would be somewhat similar,

but because of the lower elevations of the vantage points, views toward the areas where the Project facilities would be located would be screened to a greater degree by intervening features in the immediate neighborhood and on the Refinery property. From the portions of the Point Richmond neighborhood located on the southwest slopes of the ridge, Project facilities would not be visible.

The existing view from this location is represented by Photo A in Figure 8.10-6. As this photo indicates, the view from this area is a panorama that encompasses the Refinery in the middleground and the artificial slopes of the large landfill in the background. Visually dominant elements in the view include the large terra cotta colored tanks in the Refinery's Quarry Tank Farm; the large, white-colored 7-story Chevron Technology Center office building; and the Refinery process areas, which include numerous tall and narrow stacks and spherical tanks. In general, the Refinery appears as an intensively developed industrial lowland framed by near and more distant hillsides that have been substantially altered. The level of visual quality of this view is low to moderately low, reflecting low levels of visual intactness and unity, and a moderately low level of vividness.

## 8.10.5 Impacts

The following discussion of Project impacts is organized around the four questions in the Environmental Checklist (Appendix G of the CEQA Guidelines).

### 8.10.5.1 Scenic Vistas

The first checklist question is: "Would the project have a substantial adverse effect on a scenic vista?" No scenic vistas were identified in proximity to the Project sites and within the Project viewshed. The Project would have no impact under this criterion.

### 8.10.5.2 Scenic Resources in a Scenic Highway

The second checklist asks: "Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a State Scenic Highway corridor?" Because the Project sites are not within a Scenic Highway corridor or within view of a Scenic Highway, the Project would have no impact under this criterion.

### 8.10.5.3 Visual Character or Quality

The third CEQA checklist question is: "Would the project substantially degrade the existing character or quality of the site and its surroundings?" The Project aspects that were evaluated under this criterion include Project construction, the power plant structures, the changes to the existing transmission line that would take place as a part of the Project, and visible water vapor plumes.

Project Construction. Construction of the proposed power plant and associated facilities would create temporary visual changes related to the presence of equipment, materials, and workforce. Construction would involve the use of cranes, heavy construction equipment, temporary storage and office facilities, and temporary laydown/staging areas. Areas to the south of the site (indicated on Figure 8.10-1) would be used during construction for storage of equipment and materials and for parking by construction workers. Construction of the Project is expected to last for 15 months.

The visual impacts of construction of the power plant and associated facilities would be minimal because much of the construction-related activity would not be visible from areas outside the Refinery property. For example, from KOP 1 and from other areas to the south of the Refinery, the laydown areas and the construction-related activities taking place on them will not be visible because the views toward the laydown areas are blocked by the 7-story Chevron Technology Center office building. From the east and north, views toward the laydown areas will be screened by intervening Refinery facilities. Construction activities occurring on the sites of the hydrogen steam plant generator and cogeneration facility will not be generally visible to the public because views toward the surfaces of these sites from outside the Refinery are largely blocked by existing Refinery structures. To the extent that any of the construction activity could be visible to viewers outside the Refinery, the visual impacts would be minimal because the degree of visibility would be attenuated by distance, and because the construction activities would be a minor element in the existing scene, which is complex and highly industrial in character.

Impacts of Power Plant Structures and Linear Facilities During the Operational Period. The proposed Project structures are identified and described in Section 8.10.1, and in Section 2.0, Project Description. The proposed site plan and elevation drawings for the cogeneration facility is provided in Figures 2.1-1 through 2.1-3. The most visually prominent elements of the cogeneration facility would be the gas turbine and heat recovery steam generator, which would be approximately 16 feet wide, 200 feet long, and would vary in height from 31 feet to approximately 71 feet high, and which would have an exhaust stack that would be approximately 11 feet in diameter and 138.5 feet high. Because the modification of the transmission line serving the site will entail only replacement of the existing conductors with slightly larger sized conductors, the visual change to the transmission system will not be readily apparent to the average viewer. The site plan and elevation views of the hydrogen plant STG and associated equipment are presented on Figure 2.1-7. An analysis of the visual impacts of the power plant and transmission line changes as they would appear during the operational period as seen from KOP 1 is presented below.

KOP 1 – Golden Gate Avenue at Clarence Street in Point Richmond. Figure 8.10-6 presents a photo of the existing view toward the Project sites from the crest of the ridge in the Point Richmond (Photo A) and a simulation of the view as it would appear during the Project's operational period (Photo B). Comparison of the two images indicates that when the proposed Project is in place, the change to the view will be relatively subtle. In the area to the right of the center of the view, the top portion of the cogeneration plant's CTG will be visible amidst the cluster of stacks that can be seen to the left of the tree located in the foreground of the view. In addition, the CTG's stack will join the cluster of three medium-height stacks now visible in this area. At the hydrogen plant STG generator site, which is visible to the left of the center of the view, the only Project feature that will have any degree of visibility will be the cooling tower. This tower is visible as the grey rectangle to the right of the white, spherical tanks. Because all of the Project features visible from this viewpoint will be in scale with the existing structures in the Refinery, and will be similar in appearance to them, there will be no detectable change to the character of this view. In addition, because these new features do not remove any valued elements of the view, do not block views of valued features in the background, and do not substantially change the composition of this view, there will be essentially no change to the view's existing levels of vividness, unity, and

intactness, and overall level of visual quality. As a consequence, the level of visual impact to this view will be minimal and less than significant.

**Impacts of Plumes.** The Project would have a limited effect on the overall pattern of steam plumes now visible at the Refinery. At times when atmospheric conditions are conducive to plume formation, new plumes would be created by the cooling tower associated with the condensing STG that would be developed in conjunction with the proposed Hydrogen Plant. In addition, under some circumstances, small steam plumes would emanate from the stack of the proposed CTG. Because the plumes associated with the operation of the proposed Project would occur in the context of the plumes created by other Refinery operations and would constitute a relatively small part of the Refinery's overall plume-scape, and because of the distance of these plumes from viewers located outside of the Refinery, the effects of these plumes on the character and quality of the public's views toward the Refinery would be minor and less than significant.

#### 8.10.5.4 Light and Glare

The fourth CEQA checklist question is: "Would the project create a new source of substantial light and glare that would adversely affect day or nighttime views in the area?"

During periods when nighttime construction activities take place, illumination that meets state and federal worker safety regulations would be required. To the extent possible, the nighttime construction lighting would be erected pointing toward the center of the site where activities are occurring, and would be shielded. Task-specific lighting would be used to the extent practical while complying with worker safety regulations.

The proposed power plant's operation would require onsite nighttime lighting for safety and security. To reduce offsite lighting impacts, lighting at the facility would be restricted to areas required for safety, security, and operation. Exterior lights would be hooded, and lights would be directed onsite so that significant light or glare would be minimized. For areas where lighting is not required for normal operation, safety, or security, switched lighting circuits would be provided, thus allowing these areas to remain unilluminated (dark) at most times, minimizing the amount of lighting potentially visible offsite.

Because the lighting associated with the Project will be designed to limit off-site light spill, and because the Project site is located well within the Refinery property and relatively far from residential areas, the Project will have no effect on ambient lighting conditions in areas of potential sensitivity surrounding the Refinery and would not subject these areas to nighttime glare. For the same reasons, the Project will have very little effect on nighttime views toward the Project site from KOP 1 or other areas outside the Refinery. To the extent that lights associated with the Project will be visible, they will be seen in the context of the extensive nighttime lighting that already characterizes the Refinery, further minimizing the potential of the Project-related lighting to create impacts that occur regularly.

The Project structures would not include large areas of highly reflective material that would produce glare. Therefore, the proposed Project would not affect the amount of daytime glare in the area.

For these reasons, the Project would not create light or glare impacts that could be considered to be significant.

### 8.10.5.5 Cumulative Impacts

The CEQA Guidelines (Section 15355) define cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."

The CEQA Guidelines further note that:

> The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time.

As discussed in the Draft EIR for the Refinery Renewal Project (ESA, 2006), other projects planned at Richmond Refinery include upgrades to existing processing units, electrical infrastructure improvements, a new firehouse, an analysis of two LPG spheres, and recycled water programs. With the possible exception of the EBMUD Richmond Advanced Recycle Expansion (RARE) Water Project (see Section 5.2.3.1.5), these projects would be located within the existing Refinery complex, and would not expand industrial operations outside the processing, tanks storage, and wastewater processing areas. New processing facilities would be painted the same color scheme of the existing Refinery and would not represent any overall significant changes in the industrial appearance of the complex. The RARE project facilities, including the building housing the processing equipment and the storage tanks, will be visible from some viewpoints as noted in the Draft EIR; however, they too will blend in with the general appearance of the Refinery complex. Some staging and shutdown equipment laydown areas used for construction of these foreseeable projects also would be visible, and would incrementally add to the overall extent of disturbed, graded areas surrounding the main processing and tank storage facilities, but this overall impact would be less than significant.

The construction of other non-Refinery cumulative projects, together with all of the reasonably foreseeable projects at the Refinery, would expand the industrial appearance of the overall complex and the northwest portion of the City of Richmond. The development of the other, non-Refinery cumulative projects, such as planned residential and commercial projects in the City of Richmond noted in the Draft EIR including future development according to the Richmond General Plan, also would result in changes to City viewsheds in the vicinity of the Refinery and throughout the northwestern portions of the City. These new facilities would very slightly intensify the already industrialized appearance of the Refinery property and northwest Richmond. While noticeable, these visual changes would be dispersed throughout the immediate region, and would not be collectively perceptible as a substantial visual change when compared to existing conditions. During construction, staging and laydown areas would be visible, and would incrementally add to the overall extent of disturbed, graded areas in the vicinity, but this cumulative impact would be less than significant.

The reasonably foreseeable projects at the Richmond Refinery would expand the industrial appearance of the overall complex. However, none of the changes associated with individual projects would be expected to substantially alter the visual appearance of the

Refinery or affect visual resources. As such, the projects would be expected to produce a less than significant cumulative visual quality impact.

Other non-Refinery cumulative projects, together with the Refinery Renewal Project (including the PPRP), would combine to alter the general appearance of the northwestern portion of the City of Richmond. However, none of the changes would be considered to substantially impact visual resources. As such, the cumulative projects would be expected to produce a less-than-significant visual impact.

## 8.10.6 Compliance With Laws, Ordinances, Regulations and Standards

### 8.10.6.1 Introduction

This section described the LORS relevant to the visual issues associated with the Project. There are no federal, state, or regional visual resources LORS that are applicable to this Project. However, visual resource and urban design concerns applicable to the Project are addressed in the City of Richmond General Plan (City of Richmond, 1994) and City of Richmond Zoning Ordinance (City of Richmond, 2006).

### 8.10.6.2 City of Richmond General Plan

The facilities that make up the Power Plant Replacement Project would all be located within the existing Chevron Refinery within the city limits of the City of Richmond, and would therefore be subject to the provisions of the City of Richmond General Plan (City of Richmond, 1994). The General Plan designates the area in which these facilities would be located as Heavy Industry, a category that "accommodates a wide variety of industrial land uses including, but not limited to, oil refining, contractor storage yards, warehouses, machine shops, co-generation plants, and other 'heavy' industrial type uses."

The provisions of the City of Richmond's General Plan that touch on issues related to the Project's potential visual effects are summarized and evaluated for Project conformity in Table 8.10-1.

TABLE 8.10-1
Conformity of the PPRP with the City of Richmond General Plan

| Provision | Conformity? |
|---|---|
| ***Policy LU-O.2****:* Encourage local industries to develop their own plans for improving the appearance of their facilities, where possible, and for integrating their properties into the City as a whole. | Yes. The PPRP will be located well within the boundaries of the Chevron Richmond Refinery, a facility for which a series of measures have been undertaken to improve its appearance. |
| ***Policy LU-A.1:*** Evaluate project proposals for their contribution to improving Richmond's aesthetic and economic values | Yes. The Project is a new use taking place well within the boundaries of an existing facility. The Project will have no detectable adverse impacts on Richmond's aesthetic values, and will be taking place within the larger Refinery facility which through tank painting, landscaping, and other efforts, has undertaken measures to improve its appearance. |
| ***Policy LU-B.5:*** Require sufficient visual open space and/or landscaped screening between industrial operations and adjacent residential or recreational activities in order to create adequate buffers. | Yes. The Project is located well within the Refinery facility and is thus well buffered from residential and recreational areas. |

Source: City of Richmond, 1994

### 8.10.6.3 City of Richmond Zoning Ordinance

The area in which the PPRP facilities would be developed is zoned M-3 (Heavy Industrial) (see Figure 8.4-2: Zoning Districts: Refinery and Vicinity). The Zoning Ordinance indicates that this zone "…is intended to create, preserve and enhance areas containing a wide variety of industrial uses including but not limited to manufacturing and related establishments which are potentially incompatible with most other establishments, and is generally found in areas which are distant from residential areas and which provide a wide variety of sites with good rail and highway access" (Section 15.04.330.010).

The provisions of the City of Richmond's Zoning Ordinance that touch on issues related to the Project's potential visual effects are summarized and evaluated for Project conformity in Table 8.10-2.

TABLE 8.10-2
Conformity of the PPRP with the City of Richmond Zoning Ordinances

| Provision | Conformity? |
|---|---|
| **Section 15.04.330.050 Development Standards for M-3 Heavy Industrial Districts** | |
| **Building Heights and Setbacks** | |
| The maximum building height in this district is set at 75 feet, with 30 additional feet permitted for appurtenances. The ordinance specifies that the height limits do not apply to processing equipment and structures. | Yes. None of the features of the proposed Project would exceed 75 feet in height. The tallest feature of the proposed facilities is the HRSG exhaust stack, which would be 138 feet tall (processing equipment). Because the HRSG stack would be considered to be part of processing equipment, the height limits would not apply to the HRSG stack in any case. |
| Setbacks are established from adjacent streets and abutting residential properties and recreational amenities. | Yes. Because the locations of the Project features are sited well within the boundaries of the Chevron Refinery, they are far from public streets, residential properties and recreational amenities, and thus the standard setback requirements are not applicable to them. |
| **Section 15.04.820.010 Fencing and Landscaping Standards** | |
| **Section 15.04.820.013 Requirements Applicable to Commercial and Industrial Properties** | |
| Requirements for fencing and landscaping are established for the setback areas required in Section 15.04.330.050. | Yes. Because the standard setback areas would not be required for this Project, no fencing or landscaping would be necessary. |
| **Section 15.04.930 Design Review** | |
| The zoning ordinance establishes a Design Review Board, which "… shall review and/or approve, as the case may be, the design of exterior construction or modifications for which a building permit, zoning permit, certificate, or discretionary planning approval is required…"<br>The applicant is required to submit to the Design Review Board a package that includes:<br>a. Topographic survey including, but not limited to, all existing conditions on and surrounding the project site including uses, buildings, fences, grades, landscaping, streets, sidewalks, fire hydrants, and drainage. | Yes. Because the project is under the jurisdiction of the California Energy Commission rather than the City of Richmond, compliance with this and other provisions of the Richmond Zoning Ordinance are not necessarily required. However, the Applicant will submit all of the required materials to the City of Richmond for Design Review in compliance with the provisions of Section 15.04.930. |

TABLE 8.10-2
Conformity of the PPRP with the City of Richmond Zoning Ordinances

| Provision | Conformity? |
|---|---|
| b. Site plan indicating location and configuration of all buildings and proposed uses, parking spaces and circulation, fencing, street improvements, fire hydrants, refuse and waste areas, proposed grading and drainage, and other significant site features. The site plan shall include computations on the number and types of parking spaces provided, amounts of us developments shall include floor area ratio (FAR) calculations, net and gross lot area, and identify the square footage and location of all easements on the project site. | |
| c. Project summary including a complete description of all activities proposed for the site, the assessor's parcel number(s), general plan designation, zoning district, land area, building area, floor area ratio, building coverage, open space calculations, parking calculations. | |
| d. Landscaping plan indicating the location of all existing and proposed landscape plant materials including a plant list showing quantities, sizes, common and botanical names; design details for such items as walls, fences, lighting, paving, arbors, benches, and other site features; and preliminary irrigation plans including basic location, types, sizes, and quantities of fixtures. The removal and/or replacement of existing vegetation shall be clearly shown either on the submitted landscape plan or on a separate tree removal map. | |
| e. Building floor plan(s) of sufficient clarity to indicate the nature and extent of the proposal and to illustrate in detail that it will conform to the provisions of all relevant laws, codes, ordinances, rules, and regulations. Sloping lots exceeding 15% grade shall include finished floor elevations. | |
| f. Building elevations of sufficient clarity to indicate the nature of the exterior appearance of the proposal and its relationship to its surroundings. | |
| g. Typical building cross sections indicating the general nature of the method of construction along with screening of any roof-top mechanical equipment. | |
| h. Color and material samples securely fastened to an exhibit board showing samples of all proposed materials and colors of the exterior elevations. | |

Source: City of Richmond, 2006

#### 8.10.6.4 Summary of Project's Conformity with Applicable LORS

The Project is consistent with applicable LORS related to visual resources issues.

### 8.10.7 Mitigation

This analysis has documented the fact that no significant visual impacts would result from implementation of the proposed Project. Therefore, no mitigation measures are proposed.

### 8.10.8 References

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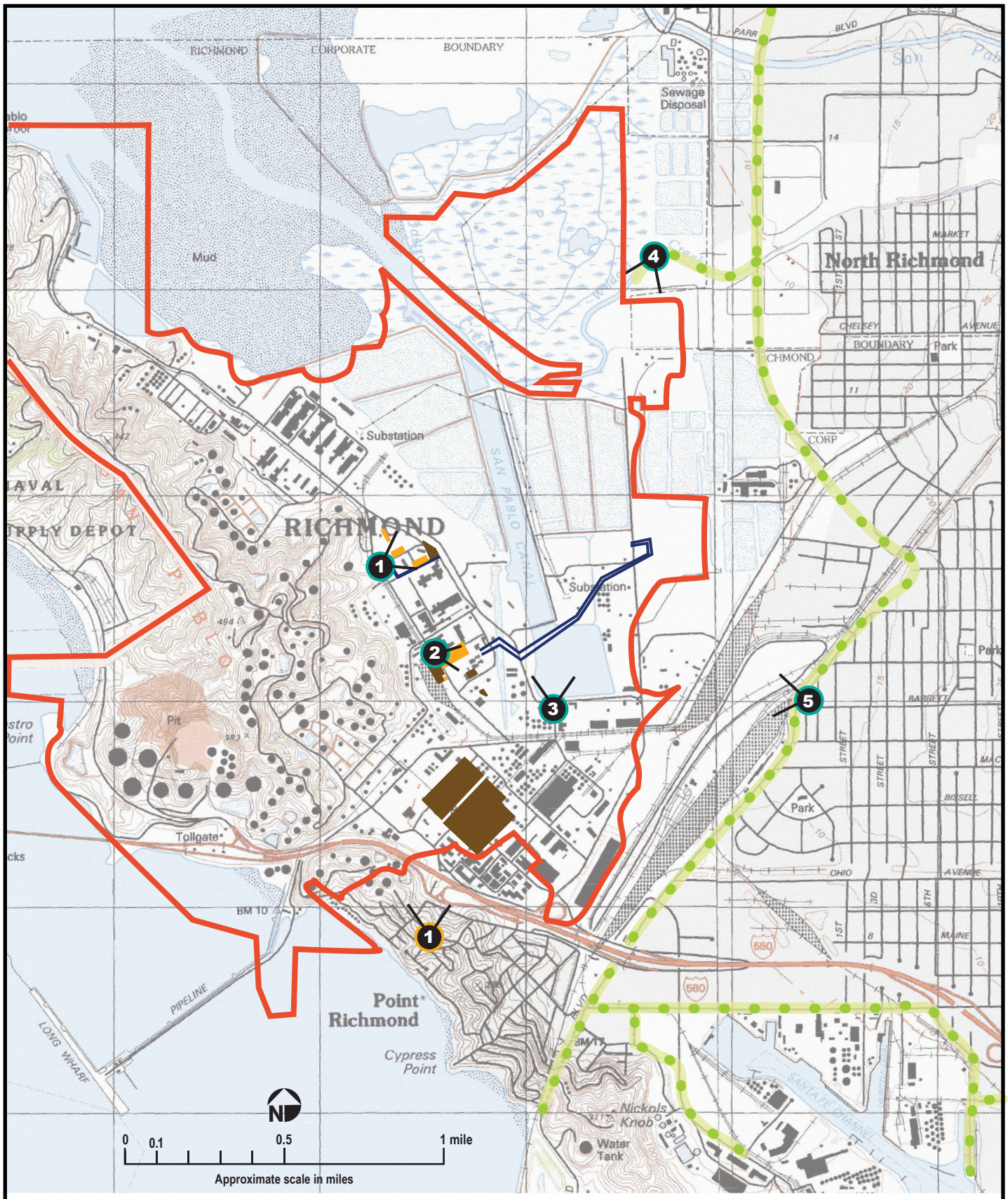


**LEGEND**

- Boundaries of Chevron Richmond Refinery
- Project Transmission Lines
- Locations of Project Facilities
- Laydown Area
- Photo Viewpoints
- Key Observation Point
- Bay Trail (improved & unimproved)

**FIGURE 8.10-1**
**LOCATIONS OF PROJECT FACILITIES AND VIEWPOINTS**
CHEVRON POWER PLANT REPLACEMENT PROJECT
RICHMOND, CA

CH2MHILL

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**Photo 1:** Existing view looking eastward across the site of the proposed hydrogen plant where the steam turbine generator, cooling tower, and switchgear that are part of the PPRP will be located.

**FIGURE 8.10-2**
**EXISTING CONDITIONS - PHOTO 1: VIEW EAST TOWARDS PROPOSED HYDROGEN PLANT STG SITE**
CHEVRON POWER PLANT REPLACEMENT PROJECT
RICHMOND, CA

CH2MHILL

**Photo 2:** Existing view looking southeastward across the site of the proposed cogeneration facility.

**FIGURE 8.10-3**
**EXISTING CONDITIONS - PHOTO 2:VIEW SOUTHEAST TOWARDS PROPOSED COGENERATION PLANT SITE**
CHEVRON POWER PLANT REPLACEMENT PROJECT
RICHMOND, CA

CH2MHILL

**Photo 3:** Existing view looking toward the transmission line that will be reconductored as a part of the proposed Project.

**FIGURE 8.10-4**
**EXISTING CONDITIONS - PHOTO 3: VIEW NORTH TOWARDS PROPOSED RECONDUCTORED TRANSMISSION LINE**
CHEVRON POWER PLANT REPLACEMENT PROJECT
RICHMOND, CA

CH2MHILL

**Photo 4:** Existing view looking southward toward the Refinery and Project site from the Bay Trail observation area along Wildcat Creek.

**Photo 5:** Existing view looking west toward the Refinery and Project site from Barrett Avenue at Garrard Boulevard.

**FIGURE 8.10-5**
**EXISTING CONDITIONS - PHOTOS 4 AND 5: VIEWS SOUTH FROM WILDCAT CREEK AND WEST TOWARDS NARRETT/GARRARD INTERSECTION**
CHEVRON POWER PLANT REPLACEMENT PROJECT
RICHMOND, CA

A. Existing view looking northward toward the Refinery and Project site from KOP 1, a viewpoint overlooking a vacant lot on Golden Gate Avenue at Clarence Street at the crest of the ridge in Point Richmond.

B. Simulation depicting the view from KOP 1 as it would appear after development of the proposed Project.

**FIGURE 8.10-6**
**KOP 1**
CHEVRON RICHMOND REFINERY POWER PLANT REPLACEMENT PROJECT
RICHMOND, CALIFORNIA

CH2MHILL

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