3.15 Aesthetics and Visual Quality

Since publication of the Draft Environmental Impact Report (EIR)/Environmental Impact Statement (EIS), the following substantive changes have been made to this section:

- An inconsistency with the City of Brisbane General Plan Policy BL.16 was added to the discussion in Section 3.15.3, Consistency with Plans and Laws.
- Section 3.15.5.8, Atherton-Mountain View Landscape Unit, was updated to reflect the closure of the Atherton Caltrain Station in 2020.
- Section 3.15.5.10 Santa Clara Landscape Unit was updated to add the Reed and Grant Streets Sports Park.
- The status of various projects and plans were updated to reflect more current information.
- Analysis about the Diridon Design Variant (DDV), which was included in Section 3.19, Design Variant to Optimize Speed, of the Draft EIR/EIS, was incorporated into Section 3.15.6, Environmental Consequences, under Impacts AVQ#1, AVQ#12, AVQ#17, and AVQ#18.
- The descriptions of AVQ-IAMF#1: Aesthetic Options, and AVQ-IAMF#2: Aesthetic Review Process, were clarified under Impacts AVQ#4 and AVQ#11.
- Impact AVQ#4 in Section 3.15.6 was revised to describe the removal of Icehouse Hill for construction of the West Brisbane Light Maintenance Facility (LMF) for Alternative B. Corresponding revisions were implemented in Section 3.15.8, Impact Summary for NEPA Comparison of Alternatives.
- Impacts AVQ#9 and AVQ#15 were revised to remove reference to platform modifications at the Atherton Caltrain Station, because the station has closed and modifications are no longer needed. Corresponding revisions were implemented in Section 3.15.8.
- Impact AVQ#17 in Section 3.15.6 was revised to provide clarifying information about the lighting design for the Brisbane LMF.

Aesthetics and Visual Quality—Key Issues:

- Construction-related degradation of residential views, particularly within the passing track area under Alternative B.
- New HSR infrastructure associated with the Millbrae Station expansion and the Brisbane LMF under both project alternatives, and the passing track under Alternative B, would contrast with the materials and scale of adjacent residential areas and the historic San Carlos depot.
- Operation of either the East or West Brisbane Light Maintenance Facility would introduce nighttime light visible from residential areas above Brisbane.

3.15.1 Introduction

This section describes the existing visual environment for the San Francisco to San Jose Project Section (Project Section, or project) resource study area (RSA), including scenic resources, and analyzes the potential impacts on aesthetics and visual quality that would result from the project alternatives. The California High-Speed Rail Authority (Authority) evaluated aesthetics and visual quality impacts by assessing the compatibility of the project with the environment, combined with the viewer perspective. Aesthetics and visual quality impacts are determined by the extent to which the project would improve the viewer experience of the environment, degrade visual resources, or alter desired views.

The *San Francisco to San Jose Project Section Aesthetics and Visual Quality Technical Report* (San Francisco to San Jose Aesthetics and Visual Quality Technical Report) (Authority 2019a) and the *San Jose to Merced Project Section Aesthetics and Visual Quality Technical Report* (San Jose to Merced Aesthetics and Visual Quality Technical Report) (Authority 2019b) provide

technical details on aesthetics and visual quality.[1] Appendices A and B of these technical reports describe the approach used to select and analyze key viewpoints (KVP) and provide aerial maps locating each KVP analyzed, images depicting the existing view, and a photosimulation of the same view with the project alternatives. Additional details on aesthetics and visual quality are provided in the following appendices in Volume 2, Technical Appendices, of this Final EIR/EIS:

- Appendix 2-D, Applicable Design Standards, describes the relevant design standards for the project.
- Appendix 2-E, Project Impact Avoidance and Minimization Features, provides a list of all impact avoidance and minimization features (IAMF) incorporated into the project.
- Appendix 2-I, Regional and Local Plans and Policies, provides a list by resource of all applicable regional or local plans and policies.
- Appendix 2-J, Policy Consistency Analysis, provides a summary of project inconsistencies and reconciliations with local plans and policies.

This section evaluates the direct and indirect impacts on aesthetics and visual quality that would occur under the No Project Alternative and the project alternatives. The following Final EIR/EIS resource sections provide additional information related to aesthetics and visual quality:

- Section 3.2, Transportation, evaluates impacts of the project alternatives on the regional transportation system, including transportation rights-of-way and transportation corridors
- Section 3.4, Noise and Vibration, evaluates impacts from installation of noise barriers to reduce noise from passing trains
- Section 3.12, Socioeconomics and Communities, evaluates impacts related to changes in community character and cohesion
- Section 3.13, Station Planning, Land Use, and Development, evaluates impacts on land use patterns and development
- Section 3.14, Parks, Recreation, and Open Space, evaluates impacts on parks, recreational facilities, open-space areas, and school district play areas
- Section 3.16, Cultural Resources, evaluates impacts on resources with cultural or historical significance

3.15.1.1 Definition of Resources

The following are definitions for aesthetics and visual quality analyzed in this Final EIR/EIS:

- **Viewer groups**—Viewer groups include people such as residents, park and trail users (recreationists), shoppers and diners (retail), office workers (commercial), students, teachers, hospital employees (institutional), civic, industrial, and roadway/highway/trail users (travelers).
- **Viewer sensitivity**—An assessment of the concern viewer groups may have to changes in visual resources based on the relative combined levels of viewers' awareness of visual changes and their exposure to visual changes.
- **Landscape units**—Landscape units are used to divide long linear projects into logical geographic entities for which impacts from a proposed project can be assessed. Each unit typically exhibits broadly consistent visual characteristics.

[1] Technical reports for the San Francisco to San Jose Project Section evaluate the portions of the HSR alignment between 4th and King Street Station in San Francisco and Scott Boulevard in Santa Clara, while technical reports for the adjacent San Jose to Merced Project Section evaluate the portions of the HSR alignment south of Scott Boulevard to the Project Section terminus at West Alma Avenue south of the San Jose Diridon Station.

- **KVPs**—Representative examples of existing views as seen by viewer groups in each landscape unit that are used to illustrate how a proposed project alternative would change those views.
- **Visual resource**—A component of the natural, cultural, or project environment (e.g., vegetation, buildings, geometrics) that contributes to the visual character of the surrounding area or is important because of its visual characteristics or scenic qualities.
- **Visual character**—An impartial description of the visual features of the natural, cultural, and project environment.
- **Visual quality**—An assessment of what viewers like and dislike about visual resources that compose the visual character. Elements of visual quality include natural harmony, cultural order, and project coherence.
- **Visual effects**—Visual effects are determined by combining the level of change in visual quality with the viewer sensitivity to those changes.
- **Context-sensitive solutions**—A collaborative, interdisciplinary approach in which all stakeholders identify how a transportation facility may best fit its setting. The approach leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources while improving or maintaining safety, mobility, and infrastructure conditions (Federal Highway Administration [FHWA] 2015).

3.15.2 Laws, Regulations, and Orders

This section presents federal, state, regional, and local laws, regulations, and orders applicable to aesthetics and visual quality effects of the project. The Authority would implement the California High-Speed Rail (HSR) System, including the Project Section, in compliance with all federal and state regulations. Volume 2, Appendix 2-I provides regional and local plans and policies considered in the preparation of this analysis.

3.15.2.1 Federal

National Environmental Policy Act (42 U.S.C. § 4321 et seq.)

The National Environmental Policy Act (NEPA) (42 United States Code [U.S.C.] § 4321 et seq.) requires the consideration of potential environmental effects, including potential aesthetic and visual effects, in the evaluation of any proposed federal agency action. NEPA also obligates federal agencies to consider the environmental consequences, as well as other economic and technical considerations, in their projects and programs as part of the planning process. General NEPA procedures are set forth in the Council on Environmental Quality (CEQ) regulations at 40 Code of Federal Regulations (C.F.R.) Parts 1500–1508.

Section 4(f) of the U.S. Department of Transportation Act (Section 4(f)) (49 U.S.C. § 303)

Compliance with Section 4(f) is required for any transportation projects either directly implemented by, or that may receive federal funding or discretionary approvals from, the U.S. Department of Transportation. Section 4(f) protects publicly owned land of parks, recreational areas, and wildlife and waterfowl refuges, as well as historic sites of national, state, or local significance on public or private land. Pursuant to 23 U.S.C. Section 237, under the NEPA Assignment Memorandum of Understanding, the Federal Railroad Administration (FRA) delegated to the Authority its responsibilities for compliance with Section 4(f), although the Authority is required to consult with and obtain concurrence from the FRA on constructive use determinations. The Authority may not approve the use of a Section 4(f) property, as defined in 49 U.S.C. Section 303(c), unless there is no feasible and prudent alternative to avoid the use of the property and the action includes all possible planning to minimize harm resulting from such use, or the project has a *de minimis* impact on the Section 4(f) property consistent with the requirements of 49 U.S.C. Section 303(d).

Federal Railroad Administration, Procedures for Considering Environmental Impacts (64 Fed. Reg. 28545)

The FRA's *Procedures for Considering Environmental Impacts* states, "The EIS should identify any significant changes likely to occur in the natural environment and in the developed environment. The EIS should also discuss the consideration given to design quality, art, and architecture in project planning and development as required by U.S. Department of Transportation Order 5610.4."

National Historic Preservation Act (54 U.S.C. § 300101et seq.)

The National Historic Preservation Act (NHPA) establishes federal government policy on historic preservation. As part of the NHPA, the federal government maintains the National Register of Historic Places (NRHP), which is the official list of districts, sites, buildings, structures, and objects deemed worthy of preservation for their historical significance. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. Potential adverse effects include change in the physical features of the property's setting that contribute to its historic significance and introduction of visual elements that diminish the integrity of the property's significant historic features.

3.15.2.2 State

State Scenic Highways (Streets and Highways Code §§ 260–263)

The State Scenic Highways Program lists highways that are either eligible for designation as a scenic highway or already are designated as a scenic highway. "A highway may be designated as scenic depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view" (California Department of Transportation [Caltrans] 2017). The Streets and Highways Code establishes state responsibility for protecting, preserving, and enhancing California's natural scenic beauty of scenic routes and areas that require special scenic conservation and treatment.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) has safety and security regulatory authority over all transit agencies in California. Rules established by the CPUC are called General Orders (GO). The following GOs are relevant to vegetation clearance along the Caltrain right-of-way.

- GO 95: Overhead Electric Line Construction—This order concerns electrical clearances relative to overhead lines, including vegetation clearances.
- GO 118-A: Construction, Reconstruction and Maintenance of Walkways, and Control of Vegetation Adjacent to Railroad Tracks—This order concerns safe access and vegetation control relative to physical safe passage. The Peninsula Corridor Joint Powers Board presently maintains the right-of-way to provide clearances, including vegetation, consistent with this GO.

The CPUC initiated new rulemaking (13-03-009) in 2013 pursuant to Petition 12-10-011 concerning a new GO governing safety standards for the use of 25-kilovolt-ampere (kVA) electrical lines to power high-speed trains. The new rule is intended to establish uniform safety requirements governing the design, construction, operation, and maintenance of the 25-kVA overhead contact system (OCS) for the operation of high-speed trains in California. Among other requirements, the new rule contains vegetation clearance requirements. Although the project would use and modify the OCS installed as part of the Peninsula Corridor Electrification Project (PCEP), some of the issues addressed in the draft GO may apply to the project.

3.15.2.3 Regional and Local

City and county plans, including general plans, downtown master plans, community plans, and specific plans, address aesthetics and visual quality. Policies and regulations include design

guidelines, designated scenic corridors/routes, and identification of areas of particular scenic value. Volume 2, Appendix 2-I lists all regional and local policies that are applicable to the project.

3.15.3 Consistency with Plans and Laws

As indicated in Section 3.1.5.3, Consistency with Plans and Laws, the California Environmental Quality Act (CEQA) and CEQ NEPA regulations require a discussion of inconsistencies or conflicts between a proposed undertaking and federal, state, regional, or local plans and laws. Accordingly, this Final EIR/EIS describes the inconsistency of the project alternatives with federal, state, regional, and local plans and laws.

Several federal and state laws and implementing regulations, listed in Section 3.15.2.1, Federal, and Section 3.15.2.2, State, direct the analysis of aesthetic and visual impacts for transportation projects. Such direction includes analysis related to historic resources and state scenic highways. The federal and state requirements considered in this analysis are as follows:

- Federal direction on analysis of aesthetic and visual impacts for transportation projects. Applicable acts and laws include Section 4(f), the FRA Procedures for Considering Environmental Impacts, and the NHPA.
- State highways designated as scenic in the California Streets and Highways Code.

The Authority, as the lead agency proposing to build and operate the HSR system, is required to comply with all federal and state laws and regulations and to secure all applicable federal and state permits prior to initiating construction on the selected alternative. Therefore, there would be no inconsistencies between the project and federal and state laws and regulations.

The Authority is a state agency and therefore is not required to comply with local land use and zoning regulations; however, it has endeavored to design and build the HSR project so it is consistent with land use and zoning regulations. For example, the project would be consistent with design guidelines established to minimize infrastructure impacts on aesthetics and visual quality. The Authority reviewed a total of 19 plans and 224 policies. The project would be consistent with 220 policies and inconsistent with 4 policies in the following regional and local policies and plans:

- **City of Brisbane General Plan (City of Brisbane 2020a)**—Land Use, Policy LU.21. Both project alternatives would build a 100- to 110-acre LMF on land that is undeveloped and Alternative B would require the removal of a large portion of Icehouse Hill, eliminating views of open space that provide an image of Brisbane as separate and distinct from nearby communities and creating a view of continuous development from central Brisbane to San Francisco.
- **City of Brisbane General Plan (City of Brisbane 2020b)**—Baylands, Policy BL.16. Alternative B would place the LMF in Brisbane on the west side of the existing Caltrain railway. This would require the removal of a large portion of Icehouse Hill, eliminating its ability to screen the Kinder Morgan tank farm.
- **City of Millbrae General Plan (City of Millbrae 1998)**—Land Use, Policy LUIP-10. Both project alternatives would require relocation of the historic Millbrae Depot Building approximately 50 feet northwest from its existing location. It was moved once before, in 1980, when it was relocated 200 feet south from its original site.
- **City of San Mateo General Plan, Conservation, Open Space, Parks & Recreation Element (City of San Mateo 2011)**—Conservation/Open Space Element, C/OS 6.4. Alternative B would reduce the visual quality along El Camino Real in San Mateo by removing mature trees that obscure views of the railway to accommodate the passing track, eliminating the character of the stand. The project design, however, includes measures to soften the appearance of infrastructure, including planting replacement trees.

Volume 2, Appendix 2-J further details the project's inconsistency with these local and regional aesthetics and visual quality policies. Although the project alternatives would be inconsistent with

these specific provisions, the project includes IAMFs that require compliance with design guidelines established to provide a consistent, project-wide aesthetic sensitive to the local context for HSR non-station structures. The Authority would consult with local jurisdictions on how best to involve the community in the planning process; solicit input from local jurisdictions on their aesthetic preferences; evaluate aesthetic preferences for potential cost, schedule, and operational impacts; and provide a design review process, resulting in a Design Options and Aesthetics Cooperative Agreement that would be used to implement local jurisdictions' aesthetic approaches in the construction procurement documents. All these features will minimize impacts on aesthetics and visual quality.

3.15.4 Methods for Evaluating Impacts

The evaluation of aesthetics and visual quality is a requirement of NEPA and CEQA. The method used to evaluate aesthetics and visual quality impacts is described in the Authority's and FRA's *California High-Speed Rail Project EIR/EIS Environmental Methodology Guidelines Version 5.09* (Authority and FRA 2017), which is based on the federal guidelines provided in the FHWA's *Guidelines for the Visual Impact Assessment of Highway Projects* (FHWA 2015). As summarized in Section 3.15.1, Introduction, six other resource sections in this Final EIR/EIS also provide additional information related to aesthetics and visual quality. This section defines the RSA and summarizes the methods used to describe the existing visual character and visual quality, identifies viewer groups and their preferences, and analyzes impacts on aesthetics and visual quality. The key steps in the methodology for conducting the aesthetics and visual quality assessment are as follows:

- Establish the RSA, landscape units, and KVPs in landscape units (Section 3.15.4.1, Definition of Resource Study Area). The locations of the KVPs are illustrated on Figure 3.15-1.
- Describe the existing visual character, viewer groups and their preferences, and existing visual quality of each landscape unit (Section 3.15.5, Affected Environment). Viewer groups are shown in Table 3.15-1.
- Depict the visual appearance with the project using photosimulations.
- Analyze the project-generated change in visual quality and viewer sensitivity to this change to determine the degree of visual impact (Section 3.15.6).
- Assess the project's direct and indirect impacts on visual quality.
- Identify mitigation measures to address impacts on visual quality (Section 3.15.7, Mitigation Measures).

In addition to these steps, a 2029 Baseline condition is provided, where Caltrain is, as of 2022, undertaking electrification of the Caltrain corridor between San Francisco and San Jose as part of the PCEP. Analysis and simulations of the electrified Caltrain railway were used as a baseline against which to compare the project alternatives.

Source: Authority 2019a APRIL 2019

Figure 3.15-1 Project Alternatives, Key Viewpoints, and Regional Scenic Resources

3.15.4.1 Definition of Resource Study Area

The RSA for impacts on aesthetics and visual quality is the San Francisco to San Jose viewshed (i.e., the area that potentially could have views of project components and the area potentially viewed from HSR trains in the Project Section). The RSA for direct and indirect impacts is a 0.25-mile radius from the project footprint in urbanized areas. Where elevated or more expansive views are present or where there are prominent and regionally important visual and scenic features, such as mountain ridgelines, large iconic structures, or water features, middleground views (up to 3 miles from the project footprint) and background views (more than 3 miles from the project footprint) are discussed as contributing visual elements to the RSA. Background views, however, are not considered in depth because visual details become diminished beyond the middleground.

Twelve landscape units have been identified in the RSA for analysis. Each landscape unit is defined by a common visual character and viewer groups, and each would be subject to generally uniform visual effects. Visually distinct areas that may be present in a given landscape unit may create minor variations in visual character or a distinct viewer subgroup. Such areas are detailed as part of the landscape unit descriptions in Section 3.15.5. These landscape units are:

- Mission Bay
- Southeast San Francisco
- Brisbane
- South San Francisco
- San Bruno–Millbrae
- Burlingame
- San Mateo–Redwood City
- Atherton–Mountain View
- Sunnyvale
- Santa Clara
- Diridon Station
- San Jose Station Approach

Aesthetic resource specialists identified KVPs in the landscape units to provide representative examples of existing views of the landscape as seen by viewer groups. Appendix A of the Aesthetics and Visual Quality Technical Reports (Authority 2019a, 2019b) describes the approach that was used to select and analyze KVPs. The KVPs were used to illustrate and assess whether an alternative would be compatible or incompatible with the existing visual character. A total of 24 KVPs were identified in the RSA for the visual assessment. Figure 3.15-1 illustrates the project alternatives, the locations of KVPs, and regionally important scenic resources—such as the San Francisco Bay, San Bruno Mountain, and the Santa Cruz Mountains—that are visible from the RSA.

3.15.4.2 Impact Avoidance and Minimization Features

IAMFs are project features that are considered to be part of the project. They are included as applicable in each of the alternatives for purposes of the environmental impact analysis. The full text of the IAMFs that are applicable to the project is provided in Volume 2, Appendix 2-E. The following IAMFs are applicable to the aesthetics and visual quality analysis:

- AVQ-IAMF#1: Aesthetic Options
- AVQ-IAMF#2: Aesthetic Review Process
- SOCIO-IAMF#1: Construction Management Plan
- AQ-IAMF#1: Fugitive Dust Emissions
- LU-IAMF#1: HSR Station Area Development: General Principles and Guidelines

This environmental impact analysis considers these IAMFs as part of the project design. In Section 3.15.6, each impact narrative describes how these project features are applicable and, where appropriate, effective at avoiding or minimizing potential impacts to less than significant under CEQA.

3.15.4.3 Methods for Impact Analysis

This section describes the sources and methods the Authority used to analyze potential project impacts on aesthetics and visual quality for each landscape unit and at each KVP. These methods apply to both NEPA and CEQA analyses unless otherwise indicated. Refer to Section 3.1.5.4, Methods for Evaluating Impacts, for a description of the general framework for evaluating impacts under NEPA and CEQA. Sections 3.15.4.3, Method for Evaluating Impacts under NEPA, and 3.15.4.4, Method for Determining Significance under CEQA, describe the NEPA and CEQA impact criteria used to evaluate project impacts on aesthetics and visual quality.

This impact assessment evaluates visual quality based on the existing physical characteristics of visual resources and on viewers' awareness of and exposure to those resources. The degree of visual impact generated by a project depends on the project's visual compatibility with its surrounding environment and on viewers' sensitivity to visual changes. The following subsections describe the methods used to define the visual setting, illustrate the project appearance, and determine visual effects.

Existing Visual Character, Viewer Groups, and Visual Quality

Visual Character

Visual character is an impartial description of the visual attributes of a scene or object expressed as the natural, cultural, and project environments. Aesthetic and visual resources can include elements—such as stands of trees, rock outcroppings, historic buildings, views of an urban skyline, scenic vistas, or a visually important area of land or water—that make up the RSA. Most of the project footprint is in an existing transportation corridor.

Scenic vista views are defined as higher-quality views that generally encompass a wide area with long-range views to surrounding elements in the landscape. Such views usually occur where there is a flat landscape with little vegetation or an elevated viewing point that allows for views out and over the surrounding landscape. Vistas also have a directional range—some viewpoints have scenic vistas with a 360-degree view, while others may have a vista view confined to a narrower line of sight. Narrower vista views are often confined by topography, development, and vegetation.

For the purposes of this analysis, the term *scenic vistas* refers either to designated scenic viewpoints—ones identified in public documents or formally developed for sightseeing—or to views generally of exceptional scenic quality, particularly if widely recognized or identified in public documents. Examples of scenic vistas include:

- Public views of definable, widely recognized natural or built scenic features of public interest or concern. These features may include mountain peaks, bays, rivers, or other natural features of regional importance. These features may also include vivid built scenic features such as the Golden Gate Bridge, the Statue of Liberty, or highly vivid city skylines.
- Public views from designated view locations, such as a Caltrans public vista point along a highway, a view overlook in a national or state forest or park, or view locations designated in a land use planning document adopted by federal, state, or local government.

No formally designated scenic vistas or vista points were identified in the RSA. However, county and city documents mention many views to existing landforms and "gateway" locations along major roadways. These view locations are noted in the descriptions of each landscape unit.

In California, Caltrans designates state scenic highways. To be designated scenic, a highway must traverse an area of outstanding scenic quality, one containing striking views, flora, geology, or other unique natural attributes. The three designated scenic highways and one network of city streets in the RSA are:

- Interstate (I-) 280 in San Francisco (U.S. Highway [US] 101 to King Street)—Mission Bay and Southeast San Francisco landscape units
- 49-Mile Scenic Drive in San Francisco (following Cesar Chavez Street and I-280)—Mission Bay and Southeast San Francisco landscape units

- State Route (SR) 82 in San Mateo (Easton Drive to Crystal Springs Road)—San Mateo–Redwood City landscape unit
- All local streets (town of Atherton)—San Mateo–Redwood City landscape unit

Viewer Groups and Viewer Sensitivities

Viewers are the population affected by the project's aesthetics and are defined by their relationship to the project and their visual preferences. Viewer groups are classified by their activities, such as residential, recreational, retail, commercial, institutional, civic, industrial, and travelers. Travelers are further classified by their purpose for traveling (e.g., commuters, tourists, haulers) or mode (e.g., pedestrians, cyclists, motorists, rail users). The analysis evaluates the sensitivity of each viewer group using five ratings: low, moderately low, moderate, moderately high, and high. The sensitivity ratings for each viewer group associated with the project are shown in Table 3.15-1.

Table 3.15-1 Affected Viewer Groups and Associated Sensitivities

Viewer Group	Viewer Group Sensitivity	Reasoning
Residential viewers	High	Surrounding neighborhood appearance and views from residences are contributing factors for choice of residence and sense of pride in living in specific neighborhoods/residences, resulting in high awareness. Amount of time spent daily at residence experiencing views contributes to high exposure to views.
Recreational viewers	Low to high	Active recreationists (involved in team sports where concentration on team interaction is key) are generally focused on the activity, not the surrounding setting, and therefore have lower awareness. Passive recreationists (e.g., walkers, hikers, canoeists) travel to specific locations to experience the surroundings as part of their activity, embracing exposure to views and surroundings and having high awareness. Duration of exposure to views contributes to high sensitivity.
Retail viewers	Moderately low to moderate	Retail viewers are concerned with locating retail establishments by means of distinct architecture or signage. Awareness of surrounding environment increases if retail experience includes continued exposure to environment. For example, an outdoors farmers' market increases exposure to surroundings. An indoor supermarket produce department limits exposure once inside the building.
Commercial viewers	Moderately low to moderate	While commercial viewers may have increased awareness of views, their commercial activities command their visual attention, limiting exposure.
Institutional viewers	Moderately low to moderate	Institutional viewers, who work at an institution, have sensitivity similar to commercial viewers, but visitors would likely have a uniform moderate sensitivity, reflecting pride by awareness in the good upkeep and appearance of the institution's environment.
Civic viewers	Moderately low to moderate	Civic viewers who work at an institution have sensitivity similar to commercial viewers. Visitors would likely have a moderate sensitivity, with high awareness of the good upkeep and appearance of the institution but limited exposure due to infrequent visits to the civic facility.
Industrial viewers	Low to moderately low	Industrial viewers have a moderate awareness of the environment surrounding their workplace but low exposure to it, due to visual focus on safely executing their work and the limited number or size of windows of industrial buildings to observe the surrounding environment during work.

Viewer Group	Viewer Group Sensitivity	Reasoning
Travelers	Low to high	Awareness of travelers varies with the landscape, traffic levels (for those operating vehicles), and whether the individual is a driver or passenger. Heavier traffic requires more focus on the actions of surrounding vehicles and people, with a lower awareness of the surrounding environment beyond the path of travel. Lighter traffic provides more opportunity to be aware of the surrounding landscape. More scenic conditions raise awareness by offering visual distractions away from the path of travel, such as the sight of a landmark or sunset. Exposure varies with speed and activity while traveling. Slower travel increases exposure. If not operating a vehicle, one may concentrate on the surrounding environment (higher exposure) or read or work (lower exposure).

Sources: Authority 2019a, 2019b

Visual Quality

Visual quality is the result of how viewers perceive their environment and what those viewers like or dislike about the visual resources that compose the visual character of a particular scene. These perceptions are expressed in terms of natural harmony, cultural order, and project coherence as follows:

- **Natural harmony**—The visual character of the natural environment in combination with viewer preference affects the perception of natural harmony; viewers either consciously or unconsciously evaluate the composition of the natural environment and determine if it is harmonious or inharmonious.
- **Cultural order**—The visual character of the cultural environment in combination with viewer preferences affects the perception of order; viewers either consciously or unconsciously evaluate the composition of the cultural environment to determine if it is orderly or disorderly.
- **Project coherence**—The visual character of the project environment in combination with viewer preferences affects the perception of order; viewers either consciously or unconsciously evaluate the composition of the project environment and determine if it is coherent or incoherent.

The value placed on visual resources correlates to whether those resources meet the viewer's preferred concepts of natural harmony, cultural order, and project coherence. The greater the degree to which preferences are met, the higher the visual quality; the more they fail to match preferences, the lower the visual quality. Establishing the visual quality of the natural, cultural, and project environments aids in evaluating the overall visual quality of the landscape unit. This analysis evaluates and assesses the visual quality of each landscape unit using five descriptive ratings: low, moderately low, moderate, moderately high, and high.

Project Visual Appearance

The Authority used computer modeling and rendering techniques to prepare photographic simulations illustrating the visual elements of the project, the change in existing visual character, and the future visual appearance of each KVP with the relevant project alternative in place. The baseline simulations illustrate the improvements associated with the PCEP, which would be completed prior to initiating HSR construction. Existing topographic and site data provided the basis for developing an initial digital model. Project engineers provided plan and profile drawings of the proposed HSR facilities, from which three-dimensional rendering of the proposed facilities were created that were then overlaid onto a digital image of the existing conditions. Comparing the KVP existing photographs to the simulations provided the basis for determining potential project impacts on views and visual quality.

Project Visual Impacts

Activities such as grading and excavation and project components such as constructed elements, vegetative cover, infrastructure, and other ancillary visual elements that interact to form a composition can alter the existing visual environment. Project impacts were determined by evaluating changes to the existing visual quality and predicting viewer sensitivity to those changes, as illustrated on Figure 3.15-2. This evaluation includes an analysis of direct impacts caused by project construction and operations, and the indirect impacts from induced growth associated with the stations where HSR service would be provided.

Source: Adapted from FHWA 2015 MAY 2017

Figure 3.15-2 Visual Effects

The degree of change or value of the effect is expressed by summarizing the compatibility of the proposed project with existing conditions; the viewer sensitivity to that impact is a combination of the viewer's exposure to and awareness of the change in visual quality. The degree to which a project meets viewer preferences determines the level of change in visual quality.

The Authority assessed light and glare effects by determining whether the project would introduce new sources of light and glare that would change existing light and glare levels and whether these changes would be compatible with existing conditions. The level of change in combination with viewer exposure and sensitivity to these changes determined the level of impact.

3.15.4.4 Method for Evaluating Impacts under NEPA

CEQ NEPA regulations (40 C.F.R. Parts 1500–1508) provide the basis for evaluating project effects (as described in Section 3.1.5.4). As described in Section 1508.27 of these regulations, the criteria of context and intensity are considered together when determining the severity of the change introduced by the project.

- **Context**—For this analysis, the *context* includes adopted local plans, policies, and regulations; existing visual character; presence of parks and recreational destinations; historic districts and properties; important visual resources; and viewer groups.
- **Intensity**—For this analysis, *intensity* is determined by assessing the degree to which the project would result in changes to the context, including the introduction or alteration of features that substantially contrast with the inherent or established visual character of a view or landscape (blocking, removing, or changing a regionally or locally important visual resource or view) where the viewer sensitivity would increase the perceived impact of a visual change.

3.15.4.5 Method for Determining Significance under CEQA

According to the following standard CEQA criteria, the project would result in a significant impact on aesthetics and visual quality in the following instances:

- The project would have a substantial adverse impact on a scenic vista.
- The project would substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historical buildings along a state-designated scenic highway.
- The project would, in nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings.

- The project would, in urbanized areas, conflict with applicable zoning and other regulations governing scenic quality.
- The project would create a new source of substantial light or glare, which would adversely affect day or nighttime area views.

Other considerations include whether the project would (1) introduce elements that would conflict with the visual character of a historic district, state, or federally listed or eligible historic property or (2) substantially affect a park, recreational destination, or other feature or area identified as an important visual resource. In applying the criteria, the term *substantial* is defined as a decrease of two or more levels of visual quality in a landscape viewed by viewers with moderate to high viewer sensitivity or as a decrease of one level in a landscape viewed by viewers with high viewer sensitivity. Where individual historic properties are referenced, further information on the resources' characteristics and significance is provided in Section 3.16.

3.15.5 Affected Environment

This section describes the affected environment in the aesthetics and visual quality RSA. For each landscape unit, it provides an overview of the visual character including the natural, cultural, and project environments; the affected viewer groups; the visual quality; and the representative KVPs for the landscape units. This information provides the context for the environmental analysis and the evaluation of impacts.

3.15.5.1 Mission Bay Landscape Unit

The Mission Bay Landscape Unit extends from Fourth Street in San Francisco south along the Caltrain railway from the 4th and King Street Station to 16th Street in San Francisco. It extends west and east of the railway to encompass adjacent properties, including China Basin west of Sixth Street. The landscape unit extent, KVP locations, visual resources, and viewer groups are illustrated on Figure 3.15-3. Table 3.15-2 shows a summary of the visual resources and character and the viewer groups in the Mission Bay landscape unit and the overall existing visual quality. Aerial mapping and existing and simulated views of each KVP are provided in Appendix B of the San Francisco to San Jose Aesthetics and Visual Quality Technical Report (Authority 2019a) and the San Jose to Merced Aesthetics and Visual Quality Technical Report (Authority 2019b).

Table 3.15-2 Mission Bay Landscape Unit Visual Character, Viewer Group Sensitivity, and Visual Quality

Existing and Baseline Visual Resources and Character			Viewer Groups and Sensitivities	Existing and Baseline Visual Quality
Natural Environment	Cultural Environment	Project Environment		
▪ Level terrain ▪ Urban vegetation ▪ Background views of San Francisco skyline ▪ Good visibility ▪ China Basin Water Channel	▪ Multi-unit residential, midrise ▪ Early 1900s warehouses ▪ Commercial, midrise ▪ China Basin Water Channel Shoreline and Mission Creek Park ▪ I-280 freeway	▪ 4th & King Street Caltrain Station ▪ Caltrain terminal facilities ▪ Baseline conditions would add OCS for electrification of the Caltrain corridor	▪ Residential viewers—moderate ▪ Recreational viewers—moderate ▪ Commercial viewers—low ▪ Travelers—low to moderately high	▪ Moderately high

Source: Authority 2019a
I- = Interstate
OCS = overhead contact system

Source: Authority 2019a

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Figure 3.15-3 Key Viewpoints, Visual Resources, and Viewers—Mission Bay Landscape Unit

Visual Resources and Character

The notable visual resources in the Mission Bay Landscape Unit, based on analysis of aerial and satellite mapping, site surveys, and review of city and county general plans and other policy documents, include the following:

- San Francisco skyline—The skyline of San Francisco—including the downtown high-rise buildings, the City Hall dome, and major hills including Twin Peaks, Mount Davidson, and Potrero Hill—are landmarks visible from throughout the city.
- China Basin Water Channel—The China Basin Water Channel is an inlet from San Francisco Bay with a restored shoreline and houseboat community that provides a natural open space in the Mission Bay Landscape Unit.

Natural Environment

The natural environment of the Mission Bay Landscape Unit has been defined by more than a century of human intervention. China Basin Water Channel and the level terrain were formed by filling wetlands in the late 19th and early 20th century. The shoreline vegetation along parts of the channel was planted in the past decade as new residential development replaced warehouses and rail yards. Healthy, maturing street trees line most streets, providing a thick canopy along King Street. However, there are no trees along Townsend and Seventh Streets, bordering the Caltrain tracks. Greenspace is limited to areas along the channel and in the small park under the I-280 ramps.

Background views across the rail facilities from buildings and streets bordering the terminal facilities and I-280 provide extensive panoramas of the San Francisco skyline, from the downtown towers to Twin Peaks. Other views are constrained by the elevated I-280 freeway and ramps.

Cultural Environment

The cultural environment of the Mission Bay Landscape Unit is comprised primarily of buildings built or redeveloped in the past 20 years, the elevated I-280 freeway and ramps, and Caltrain's terminal facilities and the 4th and King Street Station. The China Basin Water Channel and surrounding shoreline in China Basin offer recreational activities and access to open space.

From Fourth Street to Mission Bay Drive, the predominant visual feature is the Caltrain terminal. Spreading from Fourth to Seventh Streets, between Townsend and King Streets, the terminal facilities consist of up to 12 parallel railway tracks, a single-story station building on Fourth Street, and station platforms between tracks that extend from the station building as far as Fifth Street. Other small buildings and trailers are west of the platforms. I-280 descends to grade and becomes King Street on the south side of the terminal, with San Francisco Municipal Railway (MUNI) light-rail tracks in the street median. The Sixth Street ramps to and from I-280 cross the terminal on elevated twin ramps, descending to grade two blocks north of the terminal on Brannan Street.

Land use north and west of the Caltrain terminal is a mix of commercial, institutional, and residential uses, up to six stories high. South of the terminal, along King Street the buildings are mixed-use residential, with retail at street level and residences above, rising up to 18 stories. Mission Creek Park runs along the south shore of the China Basin Water Channel and under the I-280 freeway at the western end of the channel; park facilities include basketball courts and a boat launching facility.

South of Mission Bay Drive, the Caltrain tracks run under the elevated I-280 freeway, parallel to Seventh Street. Parking garages and office/research buildings line the east side of the freeway, visually separating the University of California San Francisco Mission Bay Campus from the railway. A mix of newly built mixed-use residential developments and older warehouses and storage lots line the west side of Seventh Street. Both Mission Bay Drive and 16th Street cross the Caltrain tracks at grade.

Project Environment

The project environment consists of the Caltrain railway corridor, which includes the San Francisco 4th and King Street Station, associated terminal facilities, and the railway approach tracks running parallel to Seventh Street under the I-280 freeway. Near the western end of the China Basin Water Channel, the railway expands from 3 to 12 tracks; some tracks west of the station tracks are used for passenger and maintenance train storage. The station's 12 tracks are served by 6 passenger platforms. Canopies extend partially along the length of each platform, providing shelter from rain and sun.

The station building is a single-story concrete structure that contains a concourse with ticket vending machines; three small shops selling coffee, sandwiches, and sundries; a waiting room with seating and adjacent restrooms; and office space for railway staff. On the Townsend Street side of the station, there is a bike storage and repair building and curbside bus stops. Passenger vehicle and taxi zones line the Fourth Street frontage. On King Street, there is a landscaped plaza from where pedestrian crossings lead to the MUNI light-rail platforms.

The electrification of the Caltrain railway, underway in 2022, would be completed prior to the start of HSR construction. The PCEP would change the visual environment along the Caltrain railway in this landscape unit. The electrification improvements would add OCS poles and wires in the railway corridor. Since the improvements would be in place at the start of HSR construction, the 2029 baseline condition includes the PCEP as the existing condition and is the basis for the impact analysis.

Viewer Groups

The Mission Bay Landscape Unit viewer groups comprise residential viewers, recreational viewers, commercial viewers, and travelers, including travelers on Caltrain. Viewer sensitivities for each of these viewer groups, shown in Table 3.15-2, can range from low to moderately high depending on the number of viewers, their proximity to the project, and the focus of their activity.

Around the 4th and King Street Caltrain Station, the station facilities, including station platforms, storage, and approach tracks, are visible for residential viewers in the surrounding neighborhoods. Sensitivity of this group is high, but their exposure is limited because their views look over the rail facilities and out to the surrounding skyline from an elevated viewpoint. Viewers from residential buildings along Seventh Street toward the railway are confronted with the elevated I-280 freeway that dominates the landscape, limiting exposure to the railway. Overall, residential viewers in the landscape unit have moderate sensitivity.

Recreational viewers around Mission Creek Park view the railway from beneath the elevated I-280 freeway and ramps. The Division Street Outfall and Channel Pump Plant limit views to the railway. The recreational facilities in the park encourage team sports, so recreationists are more focused on their activity than on the surrounding views. Therefore, their sensitivity is moderate.

Commercial viewers in midrise buildings surrounding the Caltrain station have views similar to those of residential viewers. Their views are over the rail facilities, limiting exposure, and they are engaged in work activities that limit their exposure to prolonged views from windows, making their sensitivity moderately low. Commercial viewers in Mission Bay also have very limited exposure because the elevated I-280 freeway and multilevel parking structures obscure views to the railway, giving them a low viewer sensitivity.

Fourth Street, King Street, Sixth Street, and I-280 are primary gateways into downtown San Francisco for travelers in automobiles. All these roadways parallel or cross the Caltrain station facilities, and traffic is often congested, increasing motorists' visual exposure. Travelers approaching the station on I-280 experience a view from the freeway that includes the entire downtown skyline before they descend onto King Street, parallel to the station. San Francisco's 49-Mile Drive is a designated scenic route through the city, established in 1938. It passes through the landscape unit, traveling north on I-280 and King Street. Automobile travelers have varying sensitivity, up to moderately high for travelers following the scenic drive because of the view afforded from the elevated freeway's view to the skyline.

Townsend, Seventh, and 16th Streets all have Class II bicycle lanes, attracting cyclists. Congestion and traffic requires cyclists in the area to concentrate on road conditions and not the surrounding landscape, so cyclists' sensitivity is moderately low.

Numerous pedestrians circulate around and through the Caltrain station, with peak flows corresponding to the schedule of Caltrain arrivals and departures. Many pedestrians transfer to light rail or buses or wait for an auto pick-up within a block radius of the station. Other pedestrians walk to their destinations from the station. Heavy pedestrian flows also coincide with events at the nearby Oracle Park baseball stadium (formerly AT&T Park). Because most pedestrians are regular commuters, either for work or ballgames, and are focused on reaching their scheduled destinations on time, their visual sensitivity is moderate.

Travelers on Caltrain have views to the adjacent landscape from the railway corridor, including views of the Caltrain station and storage facilities. Exposure of Caltrain travelers to any view is higher in this landscape unit than the others because of the low speed at which the trains travel in and out of the San Francisco terminal. Viewer sensitivity varies depending on passenger activity on the train. Some passengers enjoy watching the passing landscape, resulting in moderate sensitivity. Other passengers engage in conversation, reading, or working while on the train, resulting in low sensitivity.

Visual Quality

As perceived by viewer groups, the natural harmony of the Mission Bay Landscape Unit is moderate, the cultural order is moderately high, and the project coherence is high. Overall, the existing visual quality of the Mission Bay Landscape Unit is moderately high (Table 3.15-2).

Under baseline conditions, the visual quality would remain moderately high. The baseline conditions with Caltrain electrification would include OCS to power electric multiple unit (EMU) trains. The OCS would be carried on both individual poles and headspans, increasing the visual presence of the railway corridor, but it generally would not obscure views across the corridor.

Key Viewpoints

Table 3.15-3 shows the location, viewer group, visual character, nighttime lighting levels, and visual quality of the two KVPs in the Mission Bay Landscape Unit. Photographs of the existing conditions at KVPs are provided in Section 3.15.6 and in Appendix B of the San Francisco to San Jose Aesthetics and Visual Quality Technical Report (Authority 2019a) alongside simulated views of Alternatives A and B for side by side comparison.

Table 3.15-3 Key Viewpoints in the Mission Bay Landscape Unit

KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
1	4th and King Street Station, San Francisco	Traveler	▪ Low natural harmony—No distinct background view, some mature street trees, but no landscaping ▪ Moderately low cultural order—Contrasting building scales, obtrusive utility poles clutter view ▪ Moderately low project coherence—Station building architecture does not equate with role as major terminal	Moderately high	Moderately low

KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
2	4th and King Street Station Platform Four, San Francisco	Traveler	▪ Low natural harmony—View to Twin Peaks provides a sense of location, no other natural elements ▪ Moderately high cultural order—Trains stationed at platforms give sense of busy terminal ▪ High project coherence—Station elements dominate the view, platform free of clutter	Moderately high	Moderate

Source: *Authority 2019a*

3.15.5.2 Southeast San Francisco Landscape Unit

The Southeast San Francisco Landscape Unit extends south from 16th Street along the Caltrain railway to Tunnel Avenue near the Bayshore Caltrain Station. It extends west and east of the railway to encompass adjacent properties, including the Islais Creek Channel. The landscape unit extent, visual resources, and viewer groups are illustrated on Figure 3.15-4. Table 3.15-4 provides a summary of the visual resources and character and the viewer groups in the Southeast San Francisco Landscape Unit and the overall existing visual quality.

Table 3.15-4 Southeast San Francisco Landscape Unit Visual Character, Viewer Group Sensitivity, and Visual Quality

Existing and Baseline Visual Resources and Character			Viewer Groups and Sensitivity	Existing and Baseline Visual Quality
Natural Environment	Cultural Environment	Project Environment		
▪ Hills and valleys ▪ Minimal vegetation ▪ Background views of San Francisco skyline and Bay ▪ Good visibility ▪ Islais Creek Channel	▪ Multi-unit residential, single-family homes ▪ Warehouses ▪ Heavy industry ▪ Islais Creek ▪ Southeast Community Center ▪ I-280 freeway	▪ Two-track Caltrain railway ▪ 22nd Street Caltrain Station ▪ Tunnels ▪ Steel bridges ▪ Baseline conditions would add OCS for the electrification of the Caltrain corridor	▪ Residential viewers—moderate ▪ Recreational viewers—moderate ▪ Industrial viewers—moderately low ▪ Institutional viewers—moderately low ▪ Travelers—low to moderate	▪ Moderate

Source: Authority 2019a
I- = Interstate
OCS = overhead contact system

Source: Authority 2019a

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Figure 3.15-4 Key Viewpoints, Visual Resources, and Viewers—Southeast San Francisco Landscape Unit

Visual Resources and Character

The most important visual resources in the viewshed, based on analysis of aerial and satellite mapping, site surveys, and review of city and county plans and policy documents, include the following:

- San Francisco skyline—The skyline of San Francisco—including the downtown high-rise buildings, the City Hall dome, and major hills including Twin Peaks, Mount Davidson, and Potrero Hill—are landmarks visible from throughout the city.
- San Francisco Bay—San Francisco Bay is the defining natural feature of the region. Views to the Bay offer vast vistas spreading for miles to distant hills, including the Berkeley-Oakland Hills, Mount Diablo, and the Coyote Hills.
- Islais Creek—Islais Creek is an inlet from San Francisco Bay with a developing public shoreline juxtaposed with heavy industrial uses.

Natural Environment

The natural environment of the Southeast San Francisco Landscape Unit is most evident in the diverse topography of the area. At no other point in the Project Section does the Caltrain railway traverse a more varied topological landscape, passing beneath three hills in four tunnels and running on a high retained fill across the head of the Islais Creek Channel. In contrast with the mix of hills and valleys, flora in the landscape unit is minimal. Few trees grow near the railway, nor are many plants present, aside from some grasses and bushes along the tracks. The largely industrial character of the landscape unit has very little landscaping. Islais Creek Channel is lined with industrial uses, minimizing the natural interface between water and land. As the railway crosses the flatlands at the head of the Islais Creek Channel, between Potrero and Bayview Hills, distant views to the Bay and across San Francisco to the Golden Gate Bridge are available but are limited by the elevated, double-deck I-280 freeway.

Cultural Environment

The composition of the Southeast San Francisco Landscape Unit is predominantly residential and industrial. Residential uses consist of a mix of single-family and multifamily development ranging in height from one to three stories, staggered on the hillsides along wide two-lane roads, while industrial development consists of low-profile warehouses in the valleys. The dominant visual feature in this area is the elevated I-280 freeway, and views down roadways framed by development and parked cars are most significant from elevated vantage points through this stretch.

Between Cesar Chavez Street and Oakdale Avenue, the land uses are commercial and industrial, including the San Francisco Produce Market, Southeast Wastewater Treatment Facility, San Francisco Public Works facilities, and varied scrap yards and storage facilities. At Oakdale Avenue, the railway passes the Southeast Community Center and enters another tunnel to pass under the Silver Terrace residential neighborhood.

Throughout the landscape unit, few residences have close views to the railway corridor because the residential areas are primarily on higher ground, while the railway travels through the tunnels and is not visible from these areas. The residential neighborhoods are visually cohesive, with homes from the early to mid-20th century.

The industrial areas have little visual screening of their activities. Cranes, tall silos, conveyors, and sewage digester ponds are all visible from the railway. Longer views to the Bay include more silos, container cranes, and large warehouses. There are few views of nature available other than the open waters of Islais Creek or distant views to the Bay or western hills. Air quality is generally good, so distant views are usually available from throughout the landscape unit.

Project Environment

The Caltrain railway passes through the Southeast San Francisco Landscape Unit using a series of tunnels, cuts, fills, and bridges. The northern limit of the landscape unit is 16th Street in Mission Bay, where Caltrain is under the I-280 freeway. The railway turns south and enters a tunnel under the eastern slope of Potrero Hill, emerging from the tunnel at the 22nd Street Caltrain Station. I-280 dominates the area, elevated above the railway and taller than adjacent multi-unit residential buildings. The railway is in an open cut, limiting views to it from adjacent streets. Entering a tunnel south of the station, the railway emerges to cross Cesar Chavez Street on a bridge. Between Cesar Chavez Street and Oakdale Avenue, the railway passes through the area on a berm, so there are clear views to all the adjacent uses, including Islais Creek, and longer views to the Bay and city skyline. Passing under Oakdale Avenue, the railway enters another tunnel to pass under the Silver Terrace residential neighborhood.

Emerging near Williams Avenue, the railway passes newer multi-unit and row-home residences and older warehouses in a shallow cut. Most development is oriented away from the railway corridor, blocking views to the railway from adjacent streets. South of Paul Avenue, the railway enters another tunnel to pass under US 101 to emerge near the Bayshore Caltrain Station at the south end of the landscape unit.

The project environment is unified by the continuous two-track railway and associated infrastructure that dates from the early 20th century, including four tunnels with similar arched brick portals and numerous steel girder bridges. 22nd Street Station consists of two passenger platforms on the outside of the twin rail tracks, with minimal amenities. Shelter is provided by the I-280 viaduct that passes above the entire length and breadth of the station.

The electrification of the Caltrain railway, underway in 2022, would be complete prior to the start of HSR project construction. The PCEP would change the visual environment along the Caltrain railway in this landscape unit, so a baseline condition is presented following the description of the existing condition. The baseline condition, after Caltrain electrification, would add OCS poles and wires in the railway corridor.

Viewer Groups

The Southeast San Francisco Landscape Unit viewer groups are residential viewers, recreational viewers, commercial viewers, and travelers. Viewer sensitivities for each of these viewer groups, shown in Table 3.15-4, range from low to moderate depending upon the number of viewers, their proximity to the project, and the focus of their activity.

The Caltrain railway passes through a largely industrial landscape and is largely out of view, either running under the I-280 freeway or passing through one of four tunnels. Residential viewers who have a view of the Caltrain railway experience it as part of the surrounding industrial landscape, so their sensitivity is tempered, resulting in moderate sensitivity.

Recreational viewers along Islais Creek view the railway as it passes beneath the elevated I-280 freeway and ramps. The creek is bordered by industrial uses, including salvage yards, a MUNI bus maintenance facility, large warehouses, and the double-deck freeway. Viewers in the Palou and Phelps Park, at the intersection of Phelps Street and Palou Avenue, have a view partially obscured by mature trees down the Caltrain railway to the north. In both locations, like the area's residential viewers, their sensitivity is tempered by the industrial landscape, resulting in moderate sensitivity.

Most of the industrial buildings adjacent to the railway are one story, fronting on adjacent streets with storage facilities adjacent to the railway and limiting viewer exposure to the railway. Industrial viewers working outdoors with a view of the railway are engaged in activities where safety is a concern, such as working in scrap yards, so their focus is on their work, limiting exposure to the surrounding environment. Overall, industrial viewer sensitivity is moderately low.

The City and County of San Francisco operates a wastewater treatment facility, central motor pool, and other public works functions along the railway in this landscape unit. These institutional viewers are engaged in activities that are industrial in nature, so their sensitivity, like that of industrial workers, is moderately low.

Vehicular travelers have limited views of the railway. Viewers from I-280 experience the railway as part of the surrounding industrial landscape. Travelers on streets that cross the railway have limited exposure where the railway is in a cut under the intersecting street, with a longer exposure where the railway is visible from a distance passing over a street on a bridge. Where the railway is under or close to I-280, the elevated freeway dominates the view and limits exposure to the railway. San Francisco's 49-Mile Drive is a designated scenic route through the city, established in 1938. It passes through the landscape unit, traveling east on Cesar Chavez Street and north on I-280. While travelers on the scenic route have higher sensitivity than other travelers in the area, views from Cesar Chavez Street in the vicinity of the Caltrain crossing are dominated by the elevated I-280 freeway and industrial uses, leaving viewers following the scenic route with moderate sensitivity. The industrial landscape also tempers other automobile travelers' sensitivity, so overall their sensitivity is moderately low.

There are protected Class I bicycle lanes on Cesar Chavez Street west of the Caltrain railway. Oakdale Avenue and Cesar Chavez Street east of the railway also include Class II bicycle lanes. Evans Avenue and Paul Avenue are Class III bicycle routes. All these roadways cross either over or under the railway corridor. Cyclists' sensitivity is moderate to moderately low because they need to focus on safety along these busy streets, and exposure to the railway corridor is limited because it passes under the intersecting road in an open cut.

Caltrain travelers have limited views to the adjacent landscape from the railway corridor because of the four tunnels through which the trains pass. There are some views to the Bay near Islais Creek for people on the east side of the train, while those on the west side have limited views toward Twin Peaks. Viewer sensitivity varies depending on passenger activity on the train. Some passengers enjoy watching the passing landscape, resulting in a moderate sensitivity. Other passengers engage in conversation, reading, or working, resulting in low sensitivity to passing views.

Visual Quality

As perceived by viewers, the Southeast San Francisco Landscape Unit has a low natural harmony and a moderately high cultural order and project coherence. Overall, the existing visual quality of the Southeast San Francisco Landscape Unit is moderate (Table 3.15-4).

The baseline conditions with Caltrain electrification would include OCS to power EMU trains. The OCS would be carried on individual poles, increasing the visual presence of the railway corridor, but it generally would not obscure views across the corridor. Under the baseline conditions, the visual quality would remain moderate.

Key Viewpoints

There are no KVPs in the Southeast San Francisco Landscape Unit, because there would be limited changes to the baseline condition that would alter visual resources, and limited views to the railway would minimize the number of highly sensitive viewers.

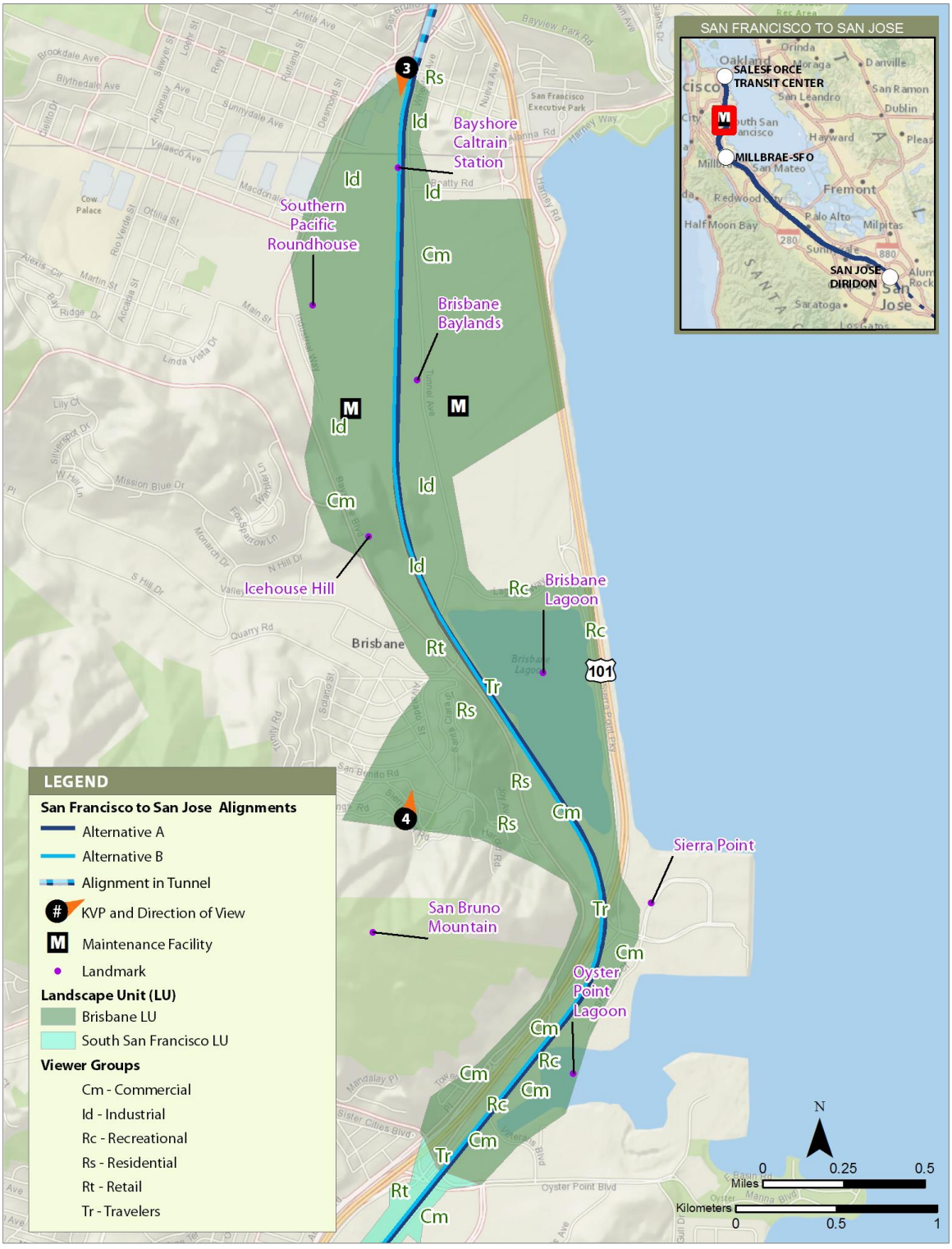
3.15.5.3 Brisbane Landscape Unit

The Brisbane Landscape Unit extends south from Tunnel Avenue in San Francisco following the Caltrain railway to Oyster Point Boulevard in South San Francisco. It extends west and east of the railway to encompass adjacent properties, including the Brisbane Baylands area, Brisbane Lagoon, residential areas on San Bruno Mountain, and bayside development between Sierra Point and Oyster Point. The landscape unit extent, KVP locations, visual resources, and viewer groups are illustrated on Figure 3.15-5. Table 3.15-5 shows the visual resources and character and the viewer groups in the Brisbane Landscape Unit and the overall existing visual quality.

Table 3.15-5 Brisbane Landscape Unit Visual Character, Viewer Group Sensitivity, and Visual Quality

Existing and Baseline Visual Resources and Character			Viewer Groups and Sensitivity	Existing and Baseline Visual Quality
Natural Environment	Cultural Environment	Project Environment		
▪ Flat reclaimed land ▪ Icehouse Hill ▪ Minimal vegetation ▪ Background views of San Bruno Mountain and Bay ▪ Good visibility ▪ Brisbane Lagoon ▪ Oyster Point Lagoon	▪ Single-family homes ▪ Warehouses ▪ Abandoned railyard ▪ Landfill and recycling facilities ▪ Commercial buildings ▪ US 101 freeway	▪ Two- to four-track Caltrain railway ▪ Bayshore Caltrain Station ▪ Baseline conditions would add OCS and a paralleling station for the electrification of the Caltrain corridor	▪ Residential viewers—moderate ▪ Recreational viewers—moderate to high ▪ Commercial viewers—moderately low ▪ Industrial viewers—moderately low ▪ Institutional viewers—moderately low ▪ Travelers—low to moderate	▪ Moderate

Source: Authority 2019a
OCS = overhead contact system
US = U.S. Highway



Source: Authority 2019a

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Figure 3.15-5 Key Viewpoints, Visual Resources, and Viewers—Brisbane Landscape Unit

Visual Resources and Character

The most important visual resources in the viewshed, based on analysis of aerial and satellite mapping, site surveys, and review of city and county general plans and other policy documents, include the following:

- San Francisco Bay—San Francisco Bay is the defining natural feature of the region. Views to the Bay offer vast vistas spreading for miles to encompass distant hills, including the Berkeley-Oakland Hills, Mount Diablo, and the Coyote Hills.
- San Bruno Mountain—San Bruno Mountain visually separates San Francisco from the cities of the northern Peninsula and provides a natural environment in a heavily urbanized area.
- Brisbane Lagoon—Brisbane Lagoon is a remnant of San Francisco Bay, created when the US 101 freeway was built on a causeway between Sierra and Candlestick Points. It provides a natural aquatic environment for flora and fauna.
- Oyster Point Lagoon—An inlet of San Francisco Bay that brings the shoreline of the Bay up to the railway just south of the US 101 overcrossing at Oyster Point.
- Southern Pacific Railroad (SPRR) Roundhouse—The roundhouse of the former SPRR rail yards in Brisbane is NRHP #10000113 and is one of the few surviving facilities from the steam rail era in the RSA.

Natural Environment

The Brisbane Landscape Unit is characterized by open space, including the natural settings of San Bruno Mountain and the Brisbane and Oyster Point Lagoons. The Caltrain railway was built in the early 20th century on fill quarried from the slopes of San Bruno Mountain and Icehouse Hill. Land east of the railway has subsequently been created by additional fill, including waste. Most of the open space is vacant land consisting of disturbed areas that were formerly part of a sanitary landfill and rail yard. These areas do not offer the high visual quality typical of open-space areas in their natural state. Mature trees screen views from US 101 toward Brisbane, and trees grow on the slopes of San Bruno Mountain, but there are few trees elsewhere in the landscape unit. Expansive views of San Francisco Bay to the east and the hillsides to the west are available through this area because of the flat terrain and limited development.

Brisbane Lagoon is physically separated from the Bay by the US 101 causeway, and visually confined by the mature trees and other flora lining the west side of the freeway. The Caltrain railway runs along its western shore, near water level, so travelers on Bayshore Boulevard have clear views across the railway to the lagoon. Farther south, the Oyster Point Lagoon brings the Bay edge immediately adjacent to the railway.

Cultural Environment

The northern half of the landscape unit, from Tunnel Avenue to the Brisbane Lagoon, is characterized by the former San Francisco landfill, fallow land, SPRR rail yards, a major waste transfer and recycling facility, and some commercial properties including a large lumber yard and fuel tank farm. Industrial development is sporadic, consisting of warehouses on large lots that are otherwise undeveloped and vacant, resembling surrounding open-space areas. The few people seen outside of buildings are users of the Bayshore Caltrain Station. Few roadways traverse this area of open space, reducing visual clutter associated with roads, such as parked and moving cars and signage.

The commercial and residential area of Brisbane is west of the Caltrain railway. Its commercial center, a collection of single-story buildings, is across from the north end of Brisbane Lagoon, but few buildings have views to the lagoon. Views to the lagoon and beyond to the Bay are available from the residences on the steep slopes of San Bruno Mountain. At Sierra Point, US 101 crosses above the railway. Land uses from Sierra Point to Oyster Point are commercial and hotel facilities oriented toward the Bay and Oyster Point Lagoon and away from the railway. Most are four stories tall, with one building of 12 stories. The San Francisco Bay Trail runs immediately next to the Caltrain tracks through part of this area.

Project Environment

Caltrain varies from two to six tracks through the landscape unit. From the north, after emerging from the tunnel, it expands from two to four tracks, to provide two through and two stopping tracks at the Bayshore Caltrain Station. The Bayshore Station stands out in the flat landscape with two tall steel towers containing stairs and elevators leading to a bridge to carry pedestrians over the Caltrain tracks from the northbound to the southbound passenger platform. Each platform has lighting, shelters, and ticket machines. Fencing confines passengers to the platforms, with access at the north end of each platform. South of the station, the railway expands to six tracks to provide sidings to deliver material, mostly lumber, to adjacent businesses. Along the shore of Brisbane Lagoon, it returns to two tracks for the remainder of the landscape unit.

The PCEP, underway in 2022, would be complete prior to the start of HSR project construction. The PCEP would change the visual environment along the Caltrain railway in this landscape unit by adding OCS poles and wires in the railway corridor. This is identified as the baseline condition and comprises the visual setting to which the HSR project components would be added.

Viewer Groups

The Brisbane Landscape Unit viewer groups consist of residential viewers, recreational viewers, commercial viewers, industrial viewers, institutional viewers, and travelers. Viewer sensitivities for each of these viewer groups, shown in Table 3.15-5, range from low to high depending on the number of viewers, their proximity to the project, and the focus of their activity. There are few viewers immediately adjacent to the Caltrain railway in the Brisbane Landscape Unit.

Residential viewers with views of the Caltrain railway are located on the slopes of hills north of the Bayshore Station or to the west on the lower parts of San Bruno Mountain. Due to their distance from the railway, their view covers a wide area but with limited detail, and these views are obscured by intervening vegetation and structures. With limited exposure, residential viewers in the landscape unit have moderate viewer sensitivity.

Recreational viewers may be found adjacent to the railway on shoreline trails around Sierra Point and farther from the railway in McClaren Park and on San Bruno Mountain. Viewers in the hillside parks see the railway as a line running through the adjacent environment, clearly defined because of its continuous path, but overshadowed by the larger forms of the Bay, mountains, US 101 causeway, and larger industrial buildings, making their exposure low. Recreationists on shoreline trails immediately adjacent to the railway, such as the San Francisco Bay Trail south of Sierra Point, who view the railway from as close as 50 feet have high exposure and high viewer sensitivity.

Commercial workers are located in the office buildings at Sierra Point, where views of the railway occur across surface parking lots, at breaks in the landscaping that lines the railway, and beneath highway bridges, all of which limit viewer exposure. Commercial viewers in these buildings have a view of the railway, US 101, and San Bruno Mountain. Engaged in work activities that further limit their exposure to prolonged views out the windows, their sensitivity is moderately low.

Most of the industrial buildings near the railway are one story. Industrial viewers working outdoors with a view of the railway are engaged in activities where safety is a concern, such as unloading lumber from railcars, so their focus is on their work, limiting exposure to the surrounding environment. Overall, industrial viewer sensitivity is moderately low.

Travelers on roads have limited views of the Caltrain railway in this landscape unit. Bayshore Boulevard and Tunnel Road run immediately adjacent to the railway for a short distance. Sierra Point Parkway is adjacent to the railway as both pass under US 101, but the view to the railway is blocked by the highway structure. There are distant views of the railway across the Brisbane Lagoon from Sierra Point Parkway. The mature landscaping along US 101 obscures views to the railway from the freeway. Because of their low exposure, sensitivity for vehicular travelers is low.

The San Francisco Bay Trail is a Class I bicycle facility. Cyclists have a moderately high viewer sensitivity to the railway where the trail is immediately adjacent to it. Class II bike lanes run along Bayshore Boulevard and Sierra Point Parkway. Heavy, fast-moving traffic on Bayshore Boulevard requires cyclists in the area to concentrate on road conditions rather than the surrounding

landscape, so cyclists' sensitivity is moderately low. Lighter traffic on Sierra Point Parkway and views of San Bruno Mountain and the Brisbane Lagoon include views of the Caltrain railway for cyclists, so their sensitivity is moderate.

Caltrain travelers have views to the adjacent landscape from the railway corridor. There are some views to the Bay and Brisbane Lagoon for people on the east side of the train, while those on the west have views toward San Bruno Mountain and the hills in southern San Francisco. Viewer sensitivity varies depending on passenger activity on the train. Some passengers enjoy watching the passing landscape, resulting in moderate sensitivity. Other passengers engage in conversation, reading, or work while on the train, resulting in low sensitivity to passing views.

Visual Quality

As perceived by viewers, the Brisbane Landscape Unit has a moderate natural harmony, a moderately low cultural order, and high project coherence. Overall, the existing visual quality of the Brisbane Landscape Unit is moderate (Table 3.15-5).

The baseline conditions with the PCEP would include OCS to power EMU trains. The OCS would be carried on individual poles, increasing the visual presence of the railway corridor, but it would not obscure views across the corridor. Additionally, a paralleling station for the OCS would be located between the Bayshore Caltrain Station and tunnel portal. Under the baseline conditions, the visual quality would remain moderate.

Key Viewpoints

Table 3.15-6 shows the location, viewer group, visual character, nighttime lighting levels, and visual quality of the two KVPs in the Brisbane Landscape Unit. Photographs of the existing conditions at KVPs are provided in Section 3.15.6. Aerial mapping and existing and simulated views of each KVP may be found in the San Francisco to San Jose Aesthetics and Visual Quality Technical Report, Appendix B (Authority 2019a).

Table 3.15-6 Key Viewpoints in the Brisbane Landscape Unit

KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
3	Bayshore Boulevard to Brisbane Baylands	Traveler	▪ Moderately low natural harmony—Clear view to San Bruno Mountain, but little flora in foreground, trees in haphazard locations ▪ Low cultural order—Foreground buildings in poor condition, empty barren land contrasts with high-rises in distance ▪ Moderately low project coherence—Caltrain corridor is barely visible except for pedestrian bridge at station	Moderately low	Moderately low
4	Kings Road, Brisbane	Residential viewer	▪ Moderately high natural harmony—Regional scope of view encompasses Berkeley Hills and San Francisco Bay; mature trees visible throughout view ▪ Moderately high cultural order—Procession of scale from nearby residences to industrial flats to San Francisco skyline ▪ Moderate project coherence—Caltrain line visible but lacks detail due to distance	Moderate	Moderately high

Source: Authority 2019a

3.15.5.4 South San Francisco Landscape Unit

The South San Francisco Landscape Unit extends south from Oyster Point Boulevard in South San Francisco along the Caltrain railway to Tanforan Avenue at the San Bruno city line. It extends west and east of the railway to encompass adjacent properties, primarily industrial and commercial uses. The landscape unit extent, visual resources, and viewer groups are illustrated on Figure 3.15-6. Table 3.15-7 shows the visual resources and character and the viewer groups in the South San Francisco Landscape Unit and the overall existing visual quality.

Table 3.15-7 South San Francisco Landscape Unit Visual Character, Viewer Group Sensitivity, and Visual Quality

Existing and Baseline Visual Resources and Character			Viewer Groups and Sensitivities	Existing and Baseline Visual Quality
Natural Environment	Cultural Environment	Project Environment		
▪ Level terrain ▪ San Bruno Mountain ▪ Colma Creek Canal ▪ Few trees ▪ Background views of western hills ▪ Good visibility	▪ Warehouses ▪ Commercial uses ▪ Industrial uses ▪ Sign Hill Park ▪ US 101 freeway	▪ Two-track Caltrain railway ▪ South San Francisco Caltrain Station ▪ Freight railroad activity and siding and storage tracks ▪ Baseline conditions would add OCS for the electrification of Caltrain	▪ Commercial viewers—moderately low ▪ Industrial viewers—moderately low ▪ Travelers—low to moderate	▪ Moderate

Source: Authority 2019a
OCS = overhead contact system
US = U.S. Highway

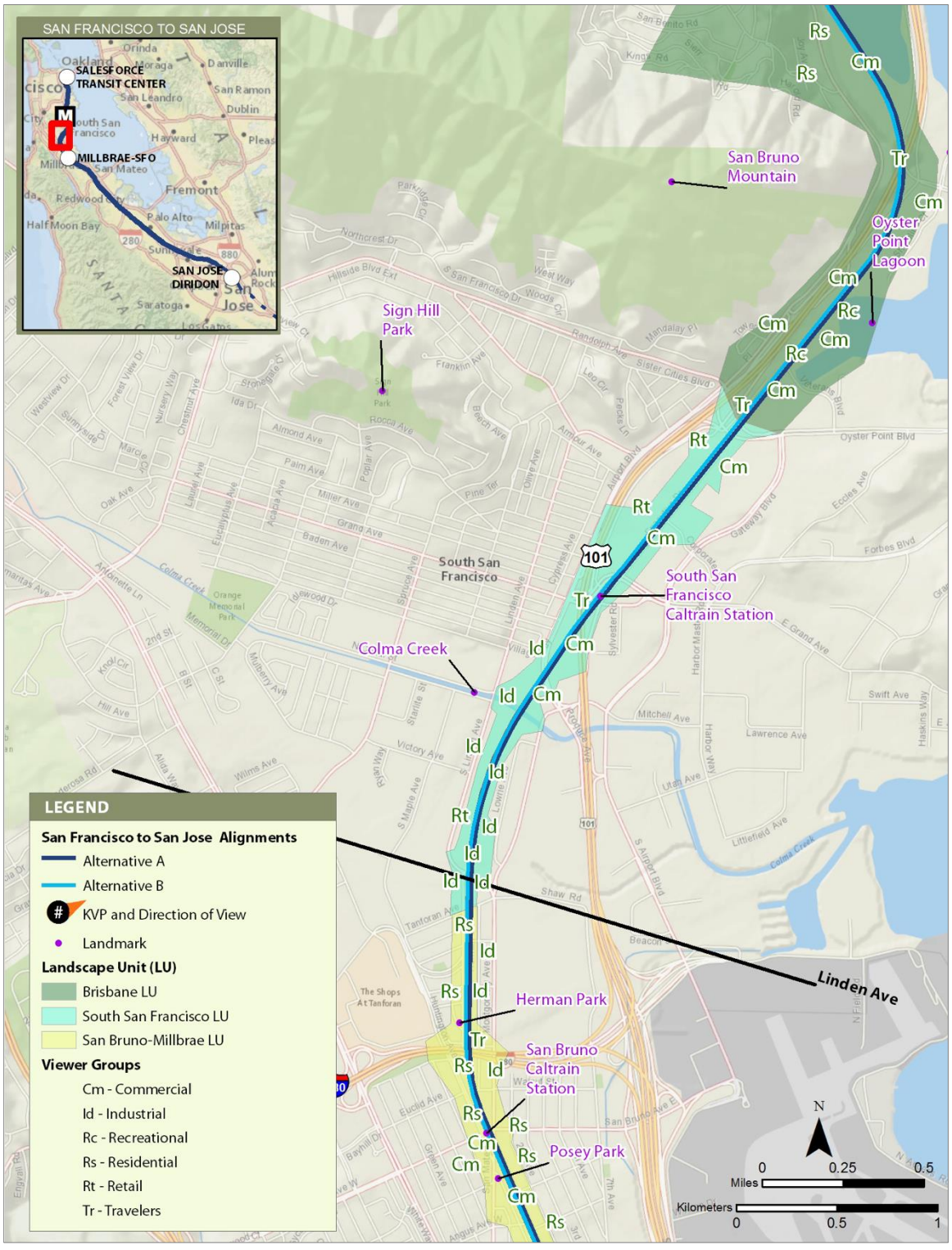
Visual Resources and Character

The most important visual resources in the viewshed, based on analysis of aerial and satellite mapping, site surveys, and review of city and county plans and policy documents, are as follows:

- San Bruno Mountain—San Bruno Mountain visually separates San Francisco from the cities of the northern Peninsula and provides a natural environment in a heavily urbanized area.
- Sign Hill Park—Sign Hill Park is home to the *South San Francisco The Industrial City* sign, NRHP #960000761. It is visible from South San Francisco and points to the south, including planes departing San Francisco International Airport (SFO).

Natural Environment

Minimal landscaping exists in the landscape unit, and it is generally not substantial enough to add to the visual quality of the area. There is no natural landscape. Colma Creek passes through the landscape unit fully enclosed in a concrete canal with no landscaping. Views to the railway are limited by the adjacent development. Views from the landscape unit are available to the western hills, Sign Hill Park, and the vegetated slopes of San Bruno Mountain Park.



Source: Authority 2019a

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Figure 3.15-6 Key Viewpoints, Visual Resources, and Viewers—South San Francisco Landscape Unit

Cultural Environment

Throughout the South San Francisco Landscape Unit, commercial and industrial uses predominate. Most structures in the landscape unit are boxy, single-story commercial and industrial buildings, used for retail and wholesale activities and manufacturing. They are oriented away from the Caltrain railway. Other uses include a series of office buildings, rising up to 12 stories, east of the railway near the South San Francisco Station, and a four-story hotel just south of the station. Low-profile, nondescript commercial and light-industrial structures and US 101 are to the west.

Project Environment

The Caltrain corridor is not visually prominent through South San Francisco due to its at-grade alignment and development adjacent to the tracks that shields views. Caltrain varies from two to eight tracks through the landscape unit. North of the South San Francisco Caltrain Station, there are eight tracks, most used by Union Pacific Railroad (UPRR) to store and assemble freight trains. There are six tracks through the station. The station is located under a highway overpass, with a partially paved parking lot and no station building or landscaping. The railway is close to downtown South San Francisco at this location, but it is physically and visually separated by the US 101/Grand Avenue interchange. Highway infrastructure dominates the station area. After passing under US 101, rail spur tracks are on the east and west sides of the corridor, and the railway crosses the Colma Creek Canal. Views are available to the railway from South Linden Avenue and San Mateo Avenue along the creek. There are four tracks south of the canal, with those to the east serving a concrete and building materials facility. Long lines of railway gravel cars serving the facility are often parked on the adjacent tracks.

Viewer Groups

The South San Francisco Landscape Unit viewer groups comprise commercial viewers, industrial viewers, and travelers. Viewer sensitivities for each of these viewer groups, shown in Table 3.15-7, range from low to moderate depending upon the number of viewers, their proximity to the project, and the focus of their activity.

There are few viewers of the Caltrain railway in the South San Francisco Landscape Unit. Commercial workers are located in the office buildings south of the railway between Oyster Point Boulevard and East Grand Avenue. Views of the railway occur across parking lots and through breaks in landscaping. In other locations, parking structures block views to the railway. These characteristics limit exposure. Most commercial viewers in these buildings have a view over the railway, toward US 101 and San Bruno Mountain. Engaged in work activities that further limit their exposure to prolonged views out the windows, their sensitivity is moderately low.

Most of the industrial buildings near the railway are one story. Industrial viewers working outdoors with a view of the railway are engaged in activities where safety is a concern, such as unloading gravel from railcars, so their focus is on their work, limiting exposure to the surrounding environment. Overall, industrial viewer sensitivity is moderately low.

Travelers on roads have limited views of the Caltrain railway in this landscape unit. Buildings block most views to the railway. The primary view occurs where Airport Boulevard dips under the railway, but a curving approach limits the time viewers are exposed to the crossing. Due to low exposure, sensitivity for vehicular travelers is low.

Class II bike lanes run along Oyster Point Boulevard and Airport Boulevard. Views of the railway are only available where Oyster Point Boulevard crosses above the railway or through the curves where Airport Boulevard crosses under the railway. Heavy, fast-moving traffic requires cyclists in the area to concentrate on road conditions rather than the surrounding landscape, so cyclists' sensitivity is moderately low.

Caltrain travelers have views to the adjacent landscape from the railway corridor. Viewer sensitivity varies depending on passenger activity on the train. Some passengers enjoy watching the passing landscape, resulting in moderate sensitivity. Other passengers engage in conversation, reading, or working while on the train, resulting in low sensitivity to passing views.

Visual Quality

As perceived by viewers, the South San Francisco Landscape Unit has a low natural harmony and a moderately high cultural order and project coherence. Overall, the existing visual quality of the South San Francisco Landscape Unit is moderate (Table 3.15-7).

The baseline conditions with the PCEP would include OCS to power EMU trains. The OCS would be carried on individual poles, increasing the visual presence of the railway corridor, but it would not obscure views across the corridor. The overall visual quality would remain moderate under the baseline conditions.

Key Viewpoints

There are no KVPs in this landscape unit because there would be limited changes to the baseline condition that would alter visual resources and limited views to the railway, minimizing the number of highly sensitive viewers.

3.15.5.5 San Bruno–Millbrae Landscape Unit

The San Bruno–Millbrae Landscape Unit extends south from Tanforan Avenue in San Bruno along the Caltrain railway to Murchison Drive in Millbrae. It extends west and east of the railway to encompass adjacent properties, including Lions Park, Bayside Manor Park, the Millbrae Bay Area Rapid Transit (BART)/Caltrain Station, and the open space west of SFO. The landscape unit extent, KVP locations, visual resources, and viewer groups are illustrated on Figure 3.15-7. Table 3.15-8 shows the visual resources and character and the viewer groups in the San Bruno–Millbrae Landscape Unit and the overall existing visual quality.

Table 3.15-8 San Bruno–Millbrae Landscape Unit Visual Character, Viewer Group Sensitivity, and Visual Quality

Existing and Baseline Visual Resources and Character			Viewer Groups and Sensitivities	Existing and Baseline Visual Quality
Natural Environment	Cultural Environment	Project Environment		
▪ Level terrain ▪ San Bruno Mountain ▪ Urban vegetation ▪ Wetlands ▪ Background views of western hills and Sweeney Ridge ▪ No major water features ▪ Good visibility	▪ Single family, 1–2 stories ▪ Multi-unit residential, 2–4 stories ▪ Industrial, single story ▪ Commercial, 2–3 stories ▪ Millbrae Historic Depot building ▪ Herman, Posey, Lions, and Bayside Manor Parks ▪ Downtown San Bruno	▪ Two-track Caltrain railway ▪ San Bruno Caltrain Station ▪ Millbrae BART/Caltrain Station ▪ Transit vehicle storage ▪ Baseline conditions would add OCS for electrification of Caltrain corridor	▪ Residential viewers—moderately high to high ▪ Recreational viewers—moderate to high ▪ Retail viewers—low to moderate ▪ Institutional viewers—moderately low ▪ Travelers—low to moderately high	▪ Moderate

Source: Authority 2019a
BART = Bay Area Rapid Transit
OCS = overhead contact system

Source: Authority 2019a

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Figure 3.15-7 Key Viewpoints, Visual Resources, and Viewers—San Bruno–Millbrae Landscape Unit

Visual Resources and Character

The most important visual resources in the viewshed, based on analysis of aerial and satellite mapping, site surveys, and review of city and county general plans and other policy documents, are as follows:

- San Bruno Mountain—San Bruno Mountain visually separates San Francisco from the cities of the northern Peninsula and provides a natural environment in a heavily urbanized area.
- Sweeney Ridge—Sweeney Ridge and the western hills provide views of undeveloped natural landscape to viewers all along the Peninsula.
- Millbrae Depot—Built in 1907 by SPRR, the station (NRHP #780000770) was moved 200 feet to its present location in 1980.

Natural Environment

Most of the San Bruno–Millbrae Landscape Unit is urbanized. Landscaping is sparse or missing in many neighborhoods along the Caltrain corridor. There are few large stands or tall trees. However, where development is absent, east of the railway between the San Bruno and Millbrae Stations, opposite SFO, the natural environment stands out amid the activity of traffic on US 101 and the backdrop of the airport.

The fields and wetlands west of SFO are bounded on the west by a long stand of mature eucalyptus and on the east by the freeway and airport interchange structures. These fields and wetlands are crossed by high-voltage power lines and tall aerial structures carrying BART to the airport. The infrastructure does not break up long views across undeveloped land in an otherwise intensively developed area. The grassy fields and wetlands' prominence is increased by their contrast to the surrounding urban development. In the same area, west of the railway, a double stand of mature eucalyptus separates the adjacent residential neighborhoods from the BART and Caltrain tracks.

Cultural Environment

Residential uses predominate in the San Bruno–Millbrae Landscape Unit. From Tanforan Avenue to the San Bruno Station, single-story residences face the railway on the west, while industrial uses back up to the railway from the east. This industrial area is unusual in that older single-family homes are interspersed throughout. There is minimal landscaping, so little blocks views to the railway from either side. Residential development in San Bruno is a mix of one- and two-story single-family and multifamily development on uniformly sized parcels set back from roadways by minimal landscaping, driveways, or small front yards. There is little consistency in the appearance of development because of an assortment of visual elements such as roofing styles, screening, landscaping, and setbacks. Parked cars, stucco buildings, and utility lines are the dominant features in these areas. The elevated I-380 freeway crosses the railway north of the San Bruno Caltrain Station.

The San Bruno Caltrain Station is located where the railway crosses over San Bruno Avenue. Downtown San Bruno extends south from the station along San Mateo Avenue, and is several blocks from the alignment; however, the gateway to the downtown area is adjacent to the tracks at the intersection of San Mateo Avenue and Huntington Avenue where both Posey Park and the *Avenue* sign are located. San Mateo Avenue is developed with side-by-side, pedestrian-scale, one-story retail uses featuring flat-front building façades, glass storefronts, varying roof lines and styles, and occasional canopies or overhangs. Vehicle parking along the roadway is provided between widely spaced street trees in large circular planters. One building, Artichoke Joe's Casino at the foot of San Mateo Avenue, adjacent to Posey Park, is a long-standing local entertainment destination, housed in a structure distinguishable by abundant signage. Channelized views of the hillsides to the southwest and San Bruno Mountain as well as occasional views of Sign Hill in South San Francisco are available from downtown San Bruno. Commercial activities extend east and west from the railway along San Bruno Avenue, but they are more highway oriented and the street lacks the pedestrian activity of downtown.

South of the station, single-story, single-family residential uses border the west side of the railway until Millbrae Station. Similar residential uses line the east side of the railway with direct views to the railway. Lions Park sits at the south edge of the residential area. It has two baseball diamonds, and is bordered by the railway, a National Guard armory, and open space and wetlands. BART transitions from a tunnel to high aerial structures that cross the open space and US 101 into the SFO Station. Views of this open-space area are limited by dense landscaping and the lack of roadways that could provide visual access.

Between San Bruno and Millbrae, the railway is bordered on each side by eucalyptus hedgerows that obscure views to and from the bordering residential areas, open space, and BART line. In Millbrae, most homes have some form of low-scale landscaped screening along property perimeters. Most residential development backs up to the tracks. Direct views from the residences to the railway are partially buffered by low fencing and landscaping. Single-family homes are mostly one story and feature pitched roofs, covered porches, driveways and garages facing the streets, and landscaped front yards or setbacks that are occasionally screened by low wooden fences. The degree of landscaping varies by neighborhood and can range from mature street trees and substantial front yard landscaping creating a visual canopy to no or minimal private landscaping.

The aesthetic setting surrounding the Millbrae Station is characterized by single-family and multifamily residential uses north of Millbrae Avenue, with a restaurant and convalescent hospital west of the station. Farther west, along El Camino Real, the area is largely developed with established auto-oriented commercial uses and some newer multifamily residential and mixed-use developments. Consequently, while the area is largely residential, its character is that of a mixed-use, commercial corridor.

South of the Millbrae Station, development along the east side of the tracks consists of low-profile, low-density, boxy, warehouse-style structures oriented away from the railway. Development is separated from the right-of-way by surface parking lots, chain link fences, or landscaping. Rollins Road, although not adjacent to the tracks, features street trees and landscaped medians. To the west in this area, one- and two-story commercial and medical office buildings and associated surface parking lots are set back from the right-of-way by parking and California Drive. There is chain link fencing along a substantial portion of the right-of-way in this area that does not shield the tracks from view. Immature to mature landscaping is present in residential areas and in the station complex but does not limit views of the station and corridor.

Project Environment

The Caltrain railway is two tracks through this landscape unit, with a third platform track at the Millbrae Station. The San Bruno Station sits atop a structure carrying the railway across San Bruno Avenue, the primary entrance to San Bruno from US 101. The station includes glass passenger shelters, ramps, stairs, and elevators to convey passengers from street level to the platforms. Posey Park sits on the western side of the station, offering a gateway into the commercial and retail district of San Bruno.

South of the San Bruno Station, BART's SFO/Millbrae line emerges from a tunnel on the east side of the Caltrain tracks. A concrete noise barrier separates the two rail systems. Two BART tracks remain at grade and two others ascend on aerial structures to curve into SFO. Passing the entrance to the airport, two BART tracks return on an aerial structure, descending to meet the at-grade BART tracks and descend into a tunnel. Caltrain continues at grade to the Millbrae Station, where BART again emerges from the tunnel just north of the station.

The Millbrae Station is a large intermodal station north of Millbrae Avenue that serves Caltrain, BART, and San Mateo County Transit District buses. The station has a parking garage and an expansive parking area northeast of the station. Its formal entry accommodates bus and vehicular passenger drop-offs. The station building features several aesthetic design treatments including a vaulted roofline with painted steel lattice supports attached to piers. An elevated concourse extends over both BART and Caltrain tracks and platforms, allowing interchange between the two rail systems.

South of the main station, a third track on the east side of the two primary Caltrain tracks serves an auxiliary station platform. BART tracks also extend south from the station to a small vehicle storage yard.

Viewer Groups

Residential viewers and travelers make up the majority of viewers in the San Bruno–Millbrae Landscape Unit, with some recreational, retail, and institutional viewers. Viewer sensitivities for each of these viewer groups, shown in Table 3.15-8, range from low to high depending on the number of viewers, their proximity to the project, and the focus of their activity.

Residences face the railway across Herman Street, Huntington Avenue, First Avenue, and San Antonio Avenue in San Bruno and Monterey and Hemlock Avenues in Millbrae. A eucalyptus hedgerow obscures views of the railway along San Antonio Avenue. In other locations, only the intervening street separates the homes from the railway, making viewer exposure and sensitivity high. In Millbrae, homes back up to the railway along Hemlock and Aviador Avenues. Sensitivity of these viewers is moderately high, their exposure reduced by fencing or landscaping that restricts views of the railway.

Recreational viewers in the landscape unit use four parks. Herman Street Park is a small playground directly across Herman Street from the railway. Exposure and sensitivity for recreational viewers here is high. Posey Park is a plaza developed as part of the San Bruno Caltrain Station, encompassing one of the ramps that lead to the station platforms. As it is visually integrated into the station, viewers are likely to associate it with the railway, leading to high exposure and sensitivity. Lions Park contains two baseball diamonds; viewers at this location are likely to be involved in, or viewing, active sports, with a focus on the activity, not the surrounding environment, so their sensitivity is moderate. Bayside Manor Park has five tennis courts for active users with a Pacific Gas and Electric Company electrical substation between the rest of the park and the railway. The size, scale, and industrial materials of the substation dominate the view, reducing exposure to the railway, resulting in moderate viewer sensitivity.

San Mateo Avenue is San Bruno's primary downtown retail corridor as it runs south from the Caltrain Station to El Camino Real. Most retail and commercial viewers are found there. Views down San Mateo Avenue terminate at the elevated Caltrain Station, so exposure is moderately high, but the focus of retail patrons is on the shops lining the street, so sensitivity is moderate. Other commercial and retail viewers are present in Millbrae, but the buildings adjacent to the railway are oriented to El Camino Real, limiting exposure and resulting in low viewer sensitivity.

Lomita Park Elementary School's students and staff are institutional viewers. The classroom buildings and playfields are close to the railway, but views are blocked by dense, mature landscaping, eliminating exposure. As students and staff are shielded from views of the railway, their sensitivity is moderately low.

Traveler views in the San Bruno–Millbrae Landscape Unit are from the major arterials that intersect the railway. Travelers passing over the railway on I-380 or Millbrae Avenue see little of the corridor as it passes beneath them. Travelers on San Bruno Avenue have high exposure to the railway because the San Bruno Caltrain Station spans San Bruno Avenue. Since this is the primary route into San Bruno, travelers' sensitivity is moderately high.

A continuous bike route runs on several streets immediately adjacent to the railway through San Bruno. In most locations, there are direct views to the railway, resulting in high exposure. Combined with light traffic, this results in moderately high sensitivity for bicyclists.

Travelers on BART have limited views to the corridor because their travel is partially in a tunnel. Where BART is aboveground across from SFO, a noise barrier blocks views to the Caltrain railway, limiting exposure. Where BART returns to run at grade at the Millbrae Station, it shares the facility with Caltrain, resulting in high visual exposure. Travelers awaiting BART trains share a platform with Caltrain, but a metal screen limits views, so overall viewer sensitivity for BART travelers is moderately low.

Caltrain travelers have views to the adjacent landscape from the railway corridor. Viewer sensitivity varies depending on passenger activity on the train. Some passengers enjoy watching the passing landscape, resulting in moderate sensitivity. Other passengers engage in conversation, reading, or working while on the train, resulting in low sensitivity to passing views.

Visual Quality

As perceived by viewers, the San Bruno–Millbrae Landscape Unit has a moderately low natural harmony, a moderately high cultural order, and a moderate project coherence. Overall, the existing visual quality of the San Bruno–Millbrae Landscape Unit is moderate (Table 3.15-8).

The baseline condition with the PCEP would include OCS to power EMU trains. The OCS would be carried on individual poles, increasing the visual presence of the railway corridor, but it would not obscure views across the corridor. The overall visual quality would remain moderate under the baseline condition.

Key Viewpoints

Table 3.15-9 shows the location, viewer group, visual character, nighttime lighting levels, and visual quality of the two KVPs in the San Bruno–Millbrae Landscape Unit. Photographs of the existing conditions at KVPs are provided in Section 3.15.6. Aerial mapping and existing and simulated views of each KVP may be found in the San Francisco to San Jose Aesthetics and Visual Quality Technical Report, Appendix B (Authority 2019a).

Table 3.15-9 Key Viewpoints in the San Bruno–Millbrae Landscape Unit

KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
5	El Camino Real, Millbrae	Traveler	▪ Low natural harmony—Very little flora beyond a few street trees of varying condition ▪ Moderately high cultural order—Land use and retail is directed at motorists. Roadway is bland but in good repair for a good example of a highway commercial district ▪ Moderately high project coherence—Only a portion of the Millbrae BART/Caltrain Station and parking garage is visible	Moderate	Moderate
6	Millbrae Historic Depot, Millbrae	Residential viewer	▪ Low natural harmony—Some trees near historic Millbrae Depot building, but no landscaping or trees along west sidewalk ▪ Moderately low cultural order—Contemporary buildings contrast with historic Millbrae Depot building. Utility poles split the view and the Millbrae Avenue overpass limits views to the immediate area ▪ Moderate project coherence—Rail corridor is visible, but both historic depot building and historic passenger car in view are not part of active railway (rather they are historic artifacts)	Moderately low	Moderately low

Source: *Authority 2019a*
BART = Bay Area Rapid Transit

3.15.5.6 Burlingame Landscape Unit

The Burlingame Landscape Unit extends southeast from Murchison Drive in Millbrae following the Caltrain railway to Peninsula Avenue in Burlingame. It extends west and east of the railway to encompass adjacent properties, including Burlingame Village Park, portions of the Broadway shopping district and US 101 interchange, Alpine Park, Burlingame High School, and Washington Park. The landscape unit extent, visual resources, and viewer groups are illustrated on Figure 3.15-8. Table 3.15-10 shows the visual resources and character and the viewer groups in the Burlingame Landscape Unit and the overall existing visual quality.

Table 3.15-10 Burlingame Landscape Unit Visual Character, Viewer Group Sensitivity, and Visual Quality

Existing and Baseline Visual Resources and Character			Viewer Groups and Sensitivities	Existing and Baseline Visual Quality
Natural Environment	Cultural Environment	Project Environment		
▪ Level terrain ▪ Urban vegetation ▪ Eucalyptus and oleander hedgerows ▪ Background views of mountain ranges ▪ Good visibility ▪ No major water features	▪ Single-family residential, 1–2 stories ▪ Multi-unit residential, 2–4 stories ▪ Industrial, single story ▪ Commercial, 2–3 stories ▪ Burlingame Train Station ▪ Burlingame Village, Alpine, and Washington Parks ▪ Burlingame High School	▪ Two-track Caltrain railway ▪ Broadway Caltrain Station ▪ Burlingame Caltrain Station ▪ Baseline conditions would add OCS and a paralleling station for electrification of Caltrain, as well as the Broadway Burlingame Grade-Separation Project	▪ Residential viewers—moderately low to high ▪ Recreational viewers—moderately high ▪ Commercial viewers—moderate ▪ Industrial viewers—moderately low ▪ Retail viewers—moderately low ▪ Institutional viewers—moderately low ▪ Travelers—low to moderately high	▪ Moderately high

Source: Authority 2019a
OCS = overhead contact system

Visual Resources and Character

The most important visual resources in the viewshed, based on analysis of aerial and satellite mapping, site surveys, and review of city and county general plans and other policy documents, are as follows:

- Sweeney Ridge—3 miles west of the railway, separating San Bruno from Pacifica, the western hills that extend south along the Peninsula provide a background of undeveloped natural landscape to viewers all along the Peninsula.
- Burlingame Train Station—Built in 1894 by SPRR, the station (NRHP #780000769) sits at the foot of Burlingame Avenue, the city's primary shopping street.

Natural Environment

Through the Burlingame Landscape Unit, outside of station areas, most of the railway is bordered by landscaping, such as hedgerows of oleander and eucalyptus, that obscures it from adjacent viewers. Between the Broadway and Burlingame Caltrain Stations, a dense and tall mature line of eucalyptus parallels the west side of the railway.

Source: Authority 2019a

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Figure 3.15-8 Key Viewpoints, Visual Resources, and Viewers—Burlingame Landscape Unit

Mature landscaping is present in residential areas, with well-established street trees supporting broad canopies. Mature redwoods line the crescent drive in front of Burlingame High School, with a younger line of redwoods along the railway in front of the school. There are no natural waterways in the area, but a reedy channel parallels the railway south of the Broadway Station. The robust urban flora within the landscape unit limits views to the immediate surroundings.

Cultural Environment

South of the Millbrae Station, the Burlingame Landscape Unit is bordered on the west by commercial uses and on the east by a small BART train storage yard and industrial development. The commercial buildings are up to nine stories tall, while the industrial buildings are single story, suited for manufacturing and warehousing. Some views from the west to the railway are available from El Camino Real between buildings, as the road sits higher than the railway. Landscaping obscures closer views from California Drive. Industrial buildings to the east are oriented away from the railway. Eucalyptus hedgerows line each side of the railway and partially block views to and from the adjacent properties. While industrial uses remain east of the railway, land uses to the west are dense, single-family residential neighborhoods. The homes are one- and two-story single-family homes set back from landscaped, tree-lined sidewalks by small front lawns, driveways, garages, and low-scale landscaped screening. Homes in these neighborhoods are visually compatible and cohesive and are of similar architectural styles. Pitched roofs, ornamental window treatments, and decorative trims are common; these elements contribute to a high visual quality of residential neighborhoods in Burlingame. Residential neighborhoods on either side of the tracks are visually divided by the orientation of residential development in relation to the tracks and the presence of the wide vegetated buffer between the right-of-way and California and Carolan Avenues, and visibility of the tracks is minimal.

Burlingame Village Park, a neighborhood park, sits about midway between the Millbrae and Broadway Caltrain Stations, immediately across California Drive from the railway. It is a small park, with healthy, mature landscaping, expansive green lawns, a basketball court, and a small playground. Views from the park to the railway are completely screened by dense trees and bushes that form a hedge along California Drive.

On either side of Broadway, there is no landscaping to obscure views to the railway from the adjacent parking lots and industrial and commercial uses. West of the railway, Broadway is a pedestrian-scaled shopping district, with mature landscaping and one- to two-story commercial buildings. An arch spans Broadway, just west of California Drive, with *Broadway-Burlingame* written on the span over the street. The former Broadway Station building, now operated as a restaurant, sits next to the tracks at the northeast corner of California Drive and Broadway. East of the railway, Broadway is bordered by car dealerships and a series of traffic signals approaching the US 101 interchange. The area is geared to vehicles, not pedestrians. Views toward the Bay are blocked by signals, signs, and the US 101 overcrossing.

The Broadway Caltrain Station is just south of the at-grade crossing at Broadway. Views to the railway are available from California Drive and the commercial and multi-unit residential buildings on either side of the railway. South of the station, a eucalyptus hedgerow screens views from the west side of the railway while a hedge of oleander and varied trees partially screens the railway from the single-family residences along Carolan Avenue.

South of the Oak Grove Avenue at-grade crossing, trees screen both sides of the railway. Burlingame High School lies to the east. The football and baseball fields and a large landscaped crescent front Carolan Avenue. Classroom buildings are set far back from the railway and Carolan Avenue. To the west, parking lots line the east side of California Drive, with residential and commercial uses on the west side of the street.

Burlingame Caltrain Station sits at the base of Burlingame Avenue. The station building blocks views to the railway. Burlingame Avenue is the city's premier shopping street. It has a pedestrian character with one- to two-story commercial buildings housing a variety of retail and restaurants. Common design elements along building façades include colorful awnings and window and roof trims. Many of the buildings have been well preserved or restored. South of the station,

commercial and industrial uses abut the railway—primarily auto dealers, repair facilities, and storage lots. A succession of streets cross the railway at grade, providing residential areas to the east with views of the corridor.

Project Environment

The Caltrain railway is two tracks through this landscape unit. The Broadway Caltrain Station consists of a parking area and passenger platform. Landscaping at the station is sparse, with few mature trees. The Burlingame Station consists of a Spanish-style building with parking area, landscaping, and passenger platform. Maturing landscaping is present along portions of adjacent roadways but does not limit views of the station or corridor.

Viewer Groups

The Burlingame Landscape Unit viewer groups are residential, recreational, commercial, industrial, retail, and traveler viewers. Viewer sensitivities for each of these viewer groups, shown in Table 3.15-10, range from low to high depending on the number of viewers, their proximity to the project, and the focus of their activity.

Residential viewers make up the majority of viewers in the Burlingame Landscape Unit. Most residential views of the Caltrain railway are blocked by landscaping, with the exception of some locations along Carolan Avenue and south of the Burlingame Caltrain Station. Where landscaping or buildings do not block views to the railway, residential viewers have high viewer sensitivity.

Recreational viewers in the landscape unit use three parks. Burlingame Village Park is directly across California Drive from the railway. Exposure for recreational viewers here is low, as dense landscaping blocks views to the railway from the park. Alpine Park is a small playground directly across Carolan Avenue and the railway. Dense landscaping lines Carolan Avenue next to the railway, but the elevation of the railway tracks allows viewers from the park to see the railway over the flora, making exposure moderately high. The park's playground equipment is scaled to small children, so recreationists in the park are primarily young children playing and their parents/guardians. The children are typically engaged in their play and the parents/guardians are monitoring the children, so their overall viewer sensitivity is moderately low. Washington Park is just north of the Burlingame Caltrain station, east of Carolan Avenue. It is heavily wooded with mature trees. A baseball diamond with grandstands and tennis courts sit in the middle of the park. Recreationists have obscured views through the park's trees and the hedgerow lining the railway, resulting in moderately low exposure. Besides a few picnic tables set back from Carolan Avenue, there are no programmed uses in the portions of the park nearest the railway, so viewer sensitivity is moderately high.

There are clusters of commercial viewers at the north and south ends of the landscape unit. South of Millbrae Avenue, commercial viewers in buildings along California Drive have views to and over the Caltrain railway, although most buildings are oriented away from the railway and toward El Camino Real, limiting exposure. Engaged in work activities that further limit their exposure to prolonged views out the windows, their sensitivity is moderately low. Around the Broadway and Burlingame Caltrain Stations, commercial buildings face the railway across California Drive, East and West Lanes, and Myrtle Road. The landscaping in these locations is not dense and only partially limits views of the railway, but traffic on streets parallel to the railway further limit views to the railway. Directly facing the railway, commercial viewers' sensitivity is moderate.

Industrial viewers are found east of the railway between the Millbrae and Broadway Caltrain Stations. Most of the industrial buildings adjacent to the railway are one story, fronting on adjacent streets, with storage facilities adjacent to the railway. Few of the buildings have windows facing the railway, and in many places trees and other flora obscure views to the railway, making exposure low. Overall, industrial viewer sensitivity is moderately low.

Broadway and Burlingame Avenue are Burlingame's retail corridors. Most retail and commercial viewers are found there. Views are narrow down Broadway toward the Caltrain railway. Views down Burlingame Avenue terminate at the Burlingame Caltrain Station, so exposure is

moderately high, but the focus of retail patrons is on the shops lining the street, so sensitivity is moderately low.

Burlingame High School's students and staff are institutional viewers. The classroom buildings are separated from Carolan Avenue and the railway by the baseball diamond and football field. Students and staff in the classrooms are shielded from views of the railway, so their sensitivity is moderately low. Students engaged in sports have limited exposure to the railway due to the hedgerow lining the railway, and sporting participants and fans are engaged in practice or competition activities; their focus is on their sport, not the surrounding environment, so their sensitivity is moderately low.

Automotive travelers' views in the Burlingame Landscape Unit use the major arterials that intersect the railway. Travelers on Broadway have a high exposure to the railway, as congested conditions and closely spaced traffic signals provide opportunities for long waits near the railway grade crossing. Since this is the primary route into Burlingame from US 101, automotive travelers' sensitivity is moderately high.

A continuous bike route runs on California Drive, East Lane, and North San Mateo Drive immediately adjacent to the railway through Burlingame. In most locations, there are obscured views through landscaping to the railway, resulting in moderate exposure. A Class III route on Oak Grove Avenue and Class II lanes on Howard Avenue cross the railway. Combined with moderate traffic, this results in moderate viewer sensitivity for bicyclists.

Caltrain travelers have views to the adjacent landscape from the railway corridor. Viewer sensitivity varies depending on passenger activity on the train. Some passengers enjoy watching the passing landscape, resulting in moderate sensitivity. Other passengers engage in conversation, reading, or working while on the train, resulting in low sensitivity to passing views.

Visual Quality

As perceived by viewers, the Burlingame Landscape Unit has a moderately high natural harmony, cultural order, and project coherence. Overall, the existing visual quality of the Burlingame Landscape Unit is moderately high (Table 3.15-10).

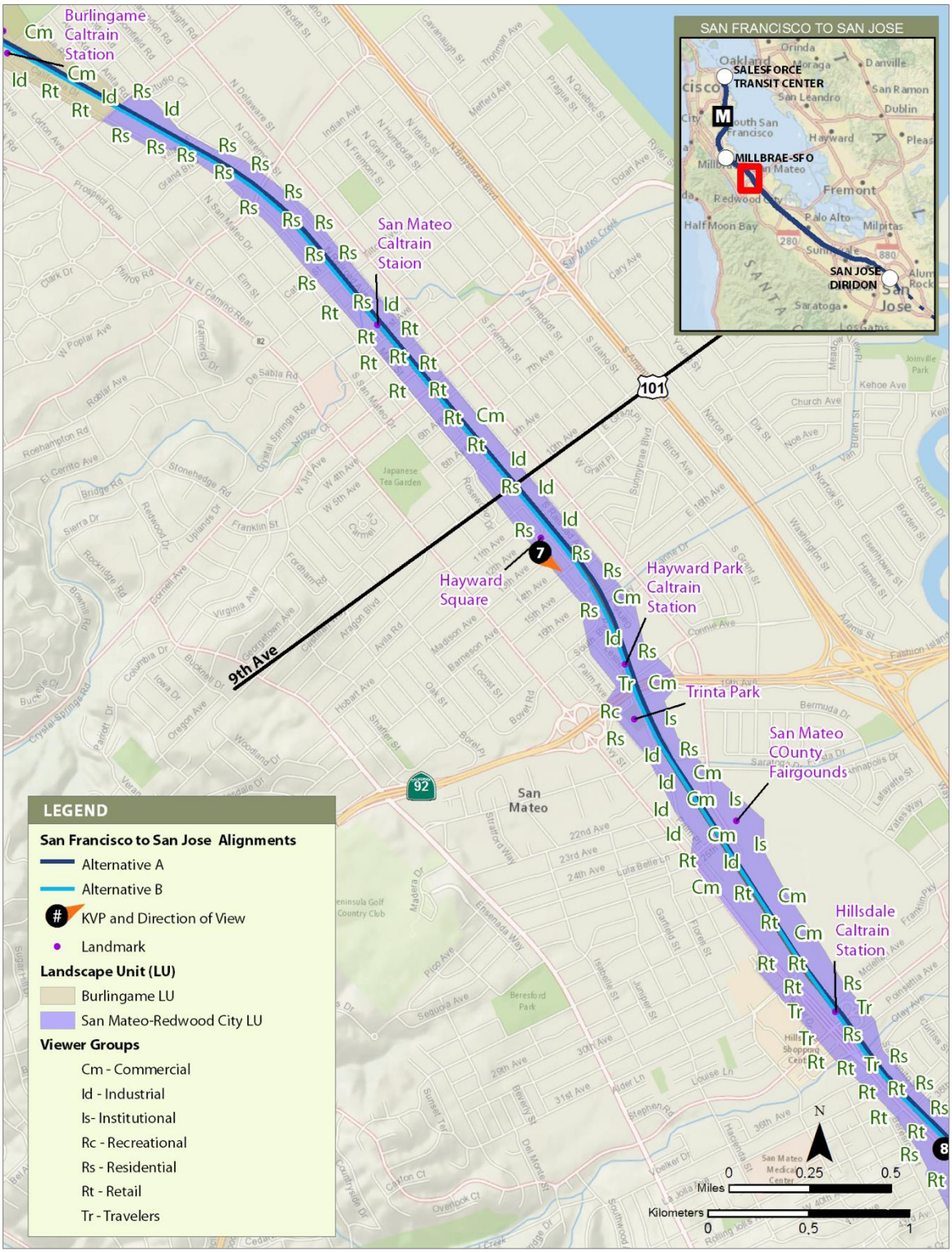
The baseline conditions with the PCEP would include OCS to power EMU trains. The OCS would be carried on individual poles, increasing the visual presence of the railway corridor, but it would not obscure views across the corridor. A paralleling station for the OCS would be between two industrial buildings off North Carolan Avenue in Burlingame. The Broadway Burlingame Grade-Separation Project, including a rebuilt Broadway Caltrain Station, would be completed prior to the start of HSR construction (Caltrain 2018a). The overall visual quality would remain moderately high under the baseline conditions.

Key Viewpoints

There are no KVPs in this landscape unit because there would be limited changes to the baseline condition that would alter visual resources.

3.15.5.7 San Mateo–Redwood City Landscape Unit

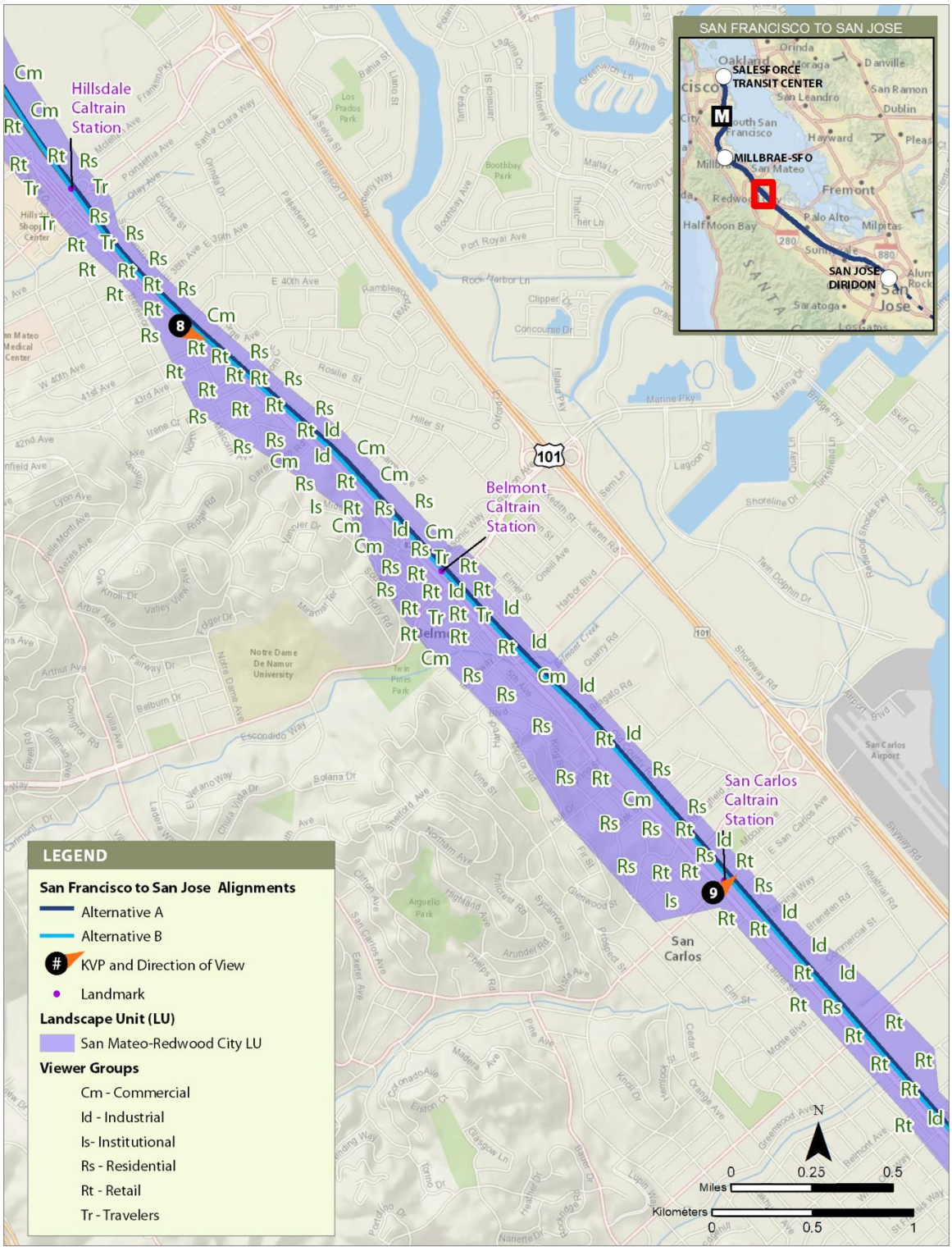
The San Mateo–Redwood City Landscape Unit extends southeast from Peninsula Avenue at the Burlingame–San Mateo border along the Caltrain railway through Belmont and San Carlos to Fifth Avenue in Redwood City. It extends west and east of the railway to encompass adjacent properties, including Hayward Square, Trinta Park, Little River Park, Roselli Park, Main Street Park, and hillside residential areas west of the railway in Belmont and San Carlos. The landscape unit extent, KVP locations, visual resources, and viewer groups are illustrated on Figure 3.15-9 through Figure 3.15-11. Table 3.15-11 shows the visual resources and character and the viewer groups in the San Mateo–Redwood City Landscape Unit and the overall existing visual quality.



Source: Authority 2019a

NOVEMBER 2019

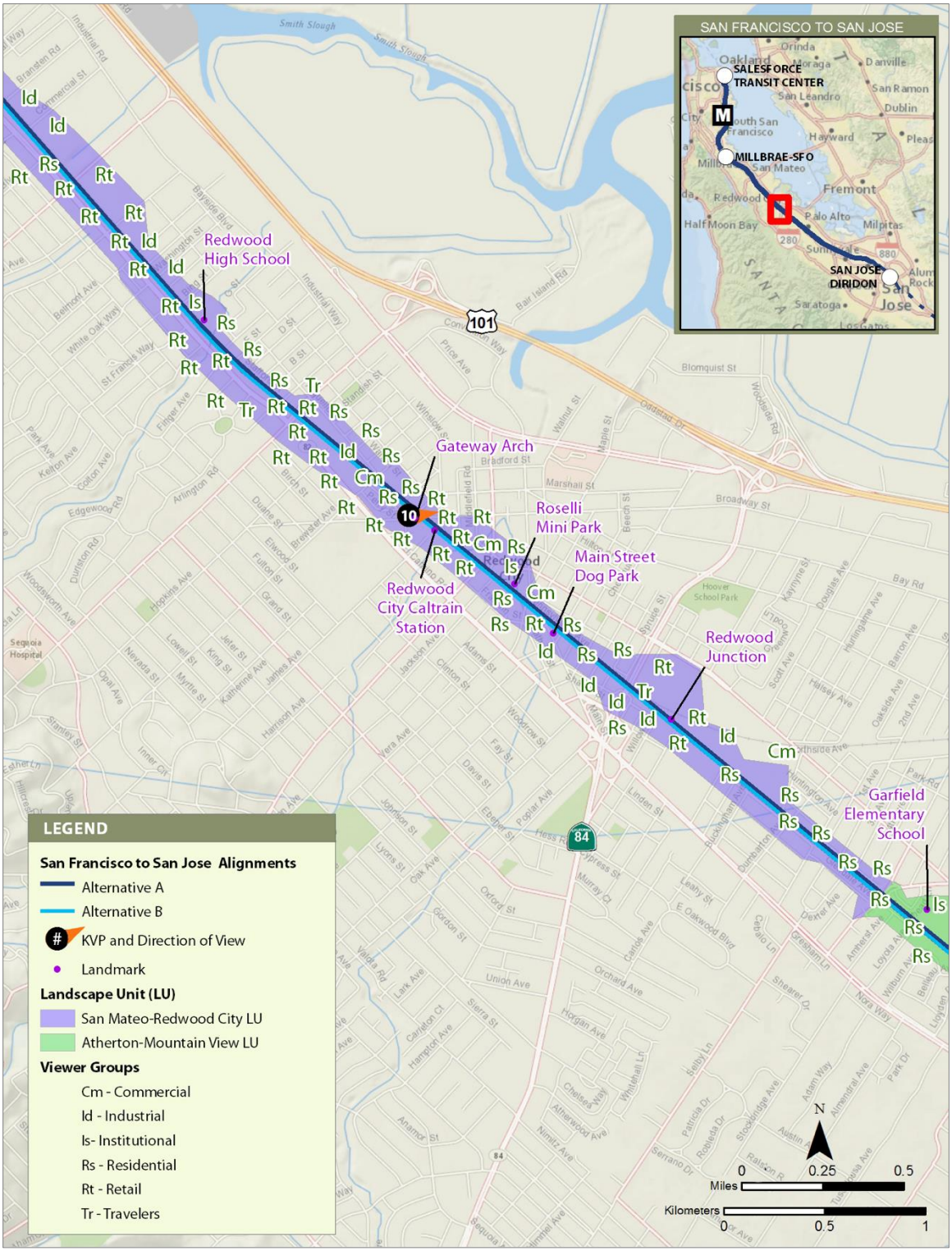
Figure 3.15-9 Key Viewpoints, Visual Resources, and Viewers—San Mateo–Redwood City Landscape Unit (Northern Portion)



Source: Authority 2019a

NOVEMBER 2019

Figure 3.15-10 Key Viewpoints, Visual Resources, and Viewers—San Mateo–Redwood City Landscape Unit (Central Portion)



Source: Authority 2019a

NOVEMBER 2019

Figure 3.15-11 Key Viewpoints, Visual Resources, and Viewers—San Mateo–Redwood City Landscape Unit (Southern Portion)

Table 3.15-11 San Mateo–Redwood City Landscape Unit Visual Character, Viewer Group Sensitivity, and Visual Quality

Existing and Baseline Visual Resources and Character			Viewer Groups and Sensitivities	Existing and Baseline Visual Quality
Natural Environment	**Cultural Environment**	**Project Environment**		
▪ Level terrain ▪ Urban vegetation ▪ San Mateo Creek ▪ Background views of mountain ranges ▪ Good visibility	▪ Single family, 1–2 stories ▪ Multi-unit residential, 2–4 stories ▪ Industrial, single story ▪ Commercial, 2–3 stories ▪ Long-established, walkable downtowns ▪ San Carlos Train Station ▪ Hayward Square, Trinta, and Main Street Parks	▪ Two- to four-track Caltrain railway ▪ San Mateo Caltrain Station ▪ Hayward Park Caltrain Station ▪ Hillsdale Caltrain Station ▪ Belmont Caltrain Station ▪ San Carlos Caltrain Station ▪ Redwood City Caltrain Station ▪ Freight vehicle storage ▪ Baseline conditions would add OCS for electrification of Caltrain corridor and the 25th Avenue Grade-Separation Project	▪ Residential viewers—moderate to high ▪ Recreational viewers—moderately low to high ▪ Commercial viewers—moderately low ▪ Industrial viewers—moderately low ▪ Retail viewers—moderate ▪ Institutional viewers—moderately low ▪ Travelers—low to moderately high	▪ Moderate

Source: Authority 2019a
OCS = overhead contact system

Visual Resources and Character

The most important visual resources in the viewshed, based on analysis of aerial and satellite mapping, site surveys, and review of city and county general plans and other policy documents, are as follows:

- Western hills—The western hills provide views of undeveloped natural landscape to viewers all along the Peninsula.
- Downtown San Mateo—San Mateo's downtown spreads west from the Caltrain railway. It is one of the larger downtown districts on the San Francisco Peninsula.
- San Carlos Train Station—Built in 1888 by the SPRR (NRHP #84001191), the depot building sits at the foot of San Carlos Avenue near the San Carlos downtown district.
- Downtown Redwood City—Downtown Redwood City hosts the government buildings for San Mateo County, including the historic San Mateo County Courthouse (NRHP #77000340) and many retail and entertainment venues, creating a busy pedestrian district.

Cultural Environment

Through the San Mateo–Redwood City Landscape Unit, no single land use predominates. Minimal landscaping obscures the railway from adjacent viewers. Most of the Caltrain stations are adjacent to commercial districts.

Beginning at the north end of San Mateo, residential neighborhoods have a mix of one- and two-story single-family and multifamily structures built out to sidewalks or set back by front lawns, driveways, or landscaping. Many of the single-family homes have low wood or chain link fences at the sidewalk; however, this feature is not always present. Development does not conform to a common architectural style, design scheme, or landscaping theme, creating a noncohesive visual environment with an array of elements. Mature trees line the streets, but only minimal landscaping separates adjacent homes from the railway. Consequently, residents have direct views to the railway where it travels along an elevated berm. Through the downtown area, two- and three-story commercial buildings line Railroad Avenue east of the railway. A multilevel parking structure and the blank wall of a theater building are west of the railway, blocking views from downtown businesses to the railway.

South of downtown San Mateo, the land use becomes less dense, with commercial and industrial uses to the east and residential uses to the west. Hayward Square Park sits off South B Street, just west of the railway, between the San Mateo and Hayward Park Caltrain Stations. It is a small square with formal and mature landscaping. Direct views to the railway are blocked by a single-story residential duplex, but the railway may be seen down adjacent streets. The Hayward Park Caltrain Station is just north of the SR 92 freeway bridge. West of the station, industrial uses back onto the railway, giving waiting passengers views to the rear of buildings and their storage and parking lots. East of the tracks, new multi-story residential buildings dominate the view.

Trinta Park, consisting of two baseball fields, is west of the railway after it passes under SR 92. South of the park, industrial and commercial uses predominate along the west side of the tracks until the Hillsdale Caltrain Station. East of the tracks is Pacific Avenue and the City of San Mateo's public works headquarters, with single-story offices, garages, and parking areas, followed by a multi-unit loft residential development and storage facilities. East 25th Avenue crosses the railway at grade between the Hayward Park and Hillsdale Caltrain Stations, ending just east of the tracks at the main gate to the San Mateo County Fairgrounds. The fairground has two large exhibit halls and a series of smaller buildings surrounding a grassy quad with mature trees. The buildings are oriented toward the quad and away from the surrounding large surface parking lots.

The Hillsdale Caltrain Station straddles the tracks, elevated on a low berm, just north of Hillsdale Avenue. West of the station, separated by parking lots and 10-lane-wide El Camino Real, is the enclosed regional Hillsdale Shopping Center. Landscaping along El Camino Real and the surrounding area is sparse, with few mature trees. Northeast of the station, recently-built midrise commercial and mixed-use buildings line the railway).

From the Hillsdale Caltrain Station to the Belmont Caltrain Station, a mix of single-family and multi-unit residential uses is east of the railway, with a small group of commercial buildings near 42nd Avenue and Marine View Avenue. El Camino Real runs along the west of the railway, while Old County Road runs along the east. Some views to the Bay are available from the railway in this area. Mature trees line Old County Road in residential areas, obscuring views to the railway in a few locations. In other locations, narrow commercial buildings sit between the railway and roadway, completely blocking views to the railway. Development along El Camino Real is characteristic of an auto-oriented commercial corridor with styles and types of development varying from newer L-shaped strip malls to older, freestanding structures, occasionally with older and notable signs and facades, to low-profile, pedestrian-scale commercial structures with multiple storefronts at the sidewalk. These uses lead to many large surface parking lots along El Camino Real, creating wide spaces between developments. West of the railway, after passing some narrow car sales lots and garages between the tracks and highway, El Camino Real rises above the tracks, giving travelers and adjacent commercial and residential viewers a view to the Bay above the railway and residential areas east of Old County Road. Some mature oaks occur north of the Belmont Caltrain Station between the railway and El Camino Real.

The Belmont Caltrain Station is located where the railway crosses Ralston Boulevard. This is a prominent location, because Ralston is the primary route into Belmont from US 101, and the small downtown district stretches west from the station on the far side of busy El Camino Real.

The visual character of the downtown area is not entirely consistent with other long-established downtowns found in other Peninsula cities; instead, the area resembles much of El Camino Real through the city, with low-density newer commercial, office, and residential development. Development in this area includes some unique design elements, such as pitched roofs and building motifs. No parks or unique visual features are immediately adjacent to the alignment nor are they visible from the adjacent roadways because of development; however, a number of older and distinctive structures are located along Old County Road and El Camino Real. The elevated railway is prominent from downtown Belmont, but it is shielded from viewers to the east by commercial uses along Old County Road. From the Belmont Caltrain Station to San Carlos Caltrain Station, the railway remains elevated on a berm.

Downtown San Carlos extends west of this station along San Carlos Avenue and features a pedestrian-oriented environment. One- and two-story buildings are tightly clustered and built to the sidewalk, featuring an array of decorative elements such as roof and window trims and colorful awnings. Continuous streetscape includes street trees, a landscaped median, benches, light poles, and signage. A gateway feature is located at San Carlos Avenue and El Camino Real. Cohesive design elements such as coordinated building façades and landscaping as well as a number of older and distinctive structures create a strong visual character in this area.

South of the San Carlos Caltrain Station, the railway remains on a berm, clearly visible from El Camino Real and commercial uses lining the west side of the road. The railway is immediately adjacent to Old County Road, with steep or retained slopes rising from the side of the street and dominating views from Old County Road because of the alignment's approximately 20-foot height. Adjacent industrial and big-box commercial uses continue east of Old County Road until Cordilleras Creek and the Redwood High School campus. The campus is shielded from Old County Road and the railway by mature trees. Where it crosses Cordilleras Creek, the railway returns to grade as it continues into Redwood City, crossing Whipple Avenue at grade.

North of downtown Redwood City, single-story commercial uses, parking lots, and storage yards line each side of the railway. Some of the large parking lots along El Camino Real provide views of the railway, but the commercial uses along the east side of the tracks block views of the railway from the residential areas farther east. Commercial development on both sides of the roadway consists of low-density, auto-oriented development, featuring one- and two-story freestanding commercial buildings and strip malls either built to the sidewalk with an accompanying surface parking lot or set back on a large lot with a front parking lot. Landscaped medians along El Camino Real occur sporadically, and landscaping along the sidewalks is sparse. Parking lots and building frontages are occasionally landscaped with trees and bushes. Although the area is entirely built out, visual breaks along the roadway created by parking lots and wide spaces between structures prevent cohesion among development and streetscapes. East of the tracks, commercial development is low-profile commercial and light industrial uses on large lots, often built out to the sidewalk or surrounded by low walls, and two- to four-story office buildings fronting tree-lined streets with associated landscaped parking lots.

Downtown Redwood City, around the Redwood City Caltrain Station, is focused along Broadway and around the San Mateo County government buildings. On both sides of the railway, Broadway is a pedestrian-focused downtown district of two- to three-story buildings housing retail, restaurants, and entertainment venues. The area has large mixed-use development, several outdoor plaza areas, mature street trees, palm trees, flowers, potted plants, and other vegetation. Most buildings feature design elements such as colored awnings and building façades. Newer commercial buildings rising up to seven stories enclose views from downtown toward the railway. A small plaza west of the railway on the north side of the station is home to Redwood City's landmark arch, which proudly proclaims "Redwood City—Weather Best by Government Test." Around the Redwood City Caltrain Station, the right-of-way is narrow, so the platforms sit against the backs of adjacent commercial buildings.

West of the station the pedestrian-oriented Sequoia Station shopping center includes mixed entertainment and commercial uses and features ample vegetation and sidewalks. The shopping center is served by large surface parking lots that back up to the fenced right-of-way and is also

easily accessible by pedestrians from the platform. Farther west of the station, the area is largely auto-oriented uses along El Camino Real, similar to other cities on the Peninsula. Parallel to the railway, development along El Camino Real is characterized by large strip shopping centers oriented around landscaped surface parking lots. The shopping centers are fairly new with cohesive design elements, such as wood veneers and rafters.

South of the Redwood City Caltrain Station, Jefferson Avenue passes under the railway, followed by a succession of at-grade street crossings. Land uses on either side of the railway is a mix of multi-unit residential and industrial uses. Roselli Mini Park sits east of the railway next to the city's main library, shielded from the railway by maturing redwood trees. West of the tracks, Main Street Park is completely exposed to the railway, separated by a wire fence. Landscaping is minimal, although there are a mature eucalyptus and palm in the park.

SR 84 crosses over the railway just north of Redwood Junction railway junction. The single-track freight line to the Port of Redwood City meets the Caltrain railway here, as does the branch leading to the Dumbarton Bridge. Freight cars with rail supplies are often stored here. There are industrial areas east of the alignment, characterized by low-rise, boxy industrial structures and warehouses surrounded by surface parking clustered together on large lots. Development is typically oriented around roadways that dead end or cul-de-sac at the railway. Consequently, industrial development rarely fronts the right-of-way and is typically separated from the tracks by minimal setbacks or utility yards. West of the railway is a retail center consisting of big-box retail development scattered on large surface parking lots. Minimal landscaping in the parking lots is generally not substantial enough to add to the visual quality of the area. The industrial uses and the tracks through this area are visually compatible.

South of the Redwood Junction railway junction, the four tracks split the Fair Oaks neighborhood. Residential development consists mostly of one- and two-story single-family homes with some multifamily development that is architecturally similar to the two-story single-family homes and set back from roadways by landscaped front yards. The architectural styles and design elements of homes in this area vary by road; however, development along each road tends to be cohesive and visually compatible. Low fences, walls, or shrubs along sidewalks and between properties are common, often shielding views of the homes, and occasionally creating visual clutter resulting from the lack of continuous and compatible screening types and conditions along sidewalks; this is especially true adjacent to the alignment. In some locations, development is set back from the tracks by a roadway, exposing the tracks that are lined by chain link fence, while in other locations residential development is adjacent to but oriented away from the tracks, shielding the tracks from the adjacent neighborhoods. The landscape unit ends where Fifth Avenue passes under the railway, now returned to two tracks.

Project Environment

Beginning at the north end of San Mateo, the two-track Caltrain railway runs on a berm with residential neighborhoods to each side. Cross streets pass under the grade-separated tracks. The railway runs at grade through downtown San Mateo, with buildings, parking, and Railroad Avenue immediately next to the tracks. The San Mateo Caltrain Station is a contemporary structure with a classic design that references the form of Los Angeles Union Station. The station building is leased to a retail venture. Sheltered platforms sit on either side of the tracks with an underground passageway connecting them. Downtown San Mateo is southwest of the station. A series of streets cross the tracks in quick succession in this area.

South of downtown San Mateo, the right-of-way widens. South of Ninth Avenue, no more streets cross the railway. The Hayward Park Caltrain Station is a pair of concrete platforms to either side of the tracks, just north of the SR 92 freeway bridge. South of SR 92 through the Hillsdale Caltrain Station, the railway traverses on to a berm to pass over 25th Avenue and two new cross streets, as part of the recently completed 25th Avenue Grade Separation Project (Caltrain n.d.).

Through Belmont and San Carlos, the railway is completely grade separated on a berm that allows the two tracks to pass over all cross streets and pedestrian walkways. The Belmont

Caltrain Station is on a berm and bridge as the railway crosses Ralston Boulevard. The San Carlos Caltrain Station is on a berm and structure behind the historic San Carlos Depot building.

At the north end of Redwood City, the railway crosses Whipple Avenue at grade, and continues at grade through Redwood City. The Redwood City Caltrain Station is a pair of platforms on each side of the tracks, just south of the Broadway grade crossing, with minimal shelters and no landscaping. The right-of-way is narrow, so the platforms sit against the backs of adjacent commercial buildings.

SR 84 crosses over the railway just north of the Redwood Junction railway junction. At this location, the railway expands from two to four mainline tracks, with two additional storage tracks. The single-track freight line to the Port of Redwood City meets the Caltrain railway here, as does the branch track leading to the Dumbarton Bridge. Freight cars with rail supplies are often stored here. At the southern boundary of the landscape unit, the railway returns to two tracks just before crossing over Fifth Avenue.

Viewer Groups

Viewers are diverse in the San Mateo–Redwood City Landscape Unit. Commercial, industrial, and residential viewers predominate, with clusters of retail and recreational viewers. Viewer sensitivities for each of these viewer groups, shown in Table 3.15-11, range from low to high depending on the number of viewers, their proximity to the project, and the focus of their activity.

Few residences face the Caltrain railway, but many are immediately adjacent, backing to the railway. One- and two-story residences face the railway along North and South Railroad Avenues and Pacific Boulevard in San Mateo; Old County Road in Belmont and San Carlos; and Stafford Street and Pennsylvania, Westmorland, and Williams Avenues in Redwood City. There is little landscaping to obscure views to the railway, so exposure is high. Residential viewer sensitivity is high. Where one- and two-story residences back up to the railway—north of the San Mateo Caltrain Station, west of the railway between Ninth Avenue and the Hayward Park Caltrain Station, and just north of Fifth Avenue in Redwood City—fences and landscaping obscure some views, resulting in moderate exposure. Sensitivity is high for these viewers. Residential viewers in multi-unit, multistory buildings west of the railway in Belmont have some views to the railway from upper floors, but commercial buildings and landscaping obscure views from lower floors, resulting in moderate exposure. Visual sensitivity for these viewers is moderately high because their views toward the railway include commercial buildings that partially block their view of the railway. Residential viewers in newer buildings south of the Redwood City Caltrain Station have moderate exposure because residential units are above ground level, so views are above and across the adjacent railway. These residential viewers also have moderately high sensitivity. Residential viewers may also be found in the hills west of the railway in Belmont and San Carlos. Because of their distance from the railway, their views cover a wider area but with less detail than those of nearer residents, and they are obscured by vegetation and structures. With limited exposure, residential viewers throughout the landscape unit have moderate viewer sensitivity.

Recreational viewers in the landscape unit use three parks. Viewers in Hayward Square have narrow views down Hanrahan Court and 12th Avenue toward the railway, limiting exposure to the railway to a small fraction of the total view from the park. Their sensitivity is moderately low. Trinta Park, west of the railway just south of SR 92, contains two baseball diamonds, a half basketball court, and a small playground. The court and playground are at the back of the park, with the two baseball diamonds adjacent to parking and the Caltrain railway. Distance, baseball dugouts, and some trees limit visual exposure to the railway from the playground. The children are typically engaged in their play and the parents/guardians in monitoring the children, so their overall sensitivity is moderately low. Recreationists involved in either basketball or baseball and any fans are engaged in practice or competitive activities. Their focus is on their sport, not the surrounding environment, so their sensitivity is moderately low. The Main Street Dog Park on Main Street in Redwood City, just west of the Caltrain railway, is adjacent and highly exposed to the railway. The viewers are dog guardians who have brought their dogs to the park for socialization and exercise. While engaged in monitoring the activities of the dogs, viewers are aware of the nearness of the railway, giving them moderately high viewer sensitivity.

Commercial viewers are present along the railway in single-story buildings from the San Mateo Caltrain Station to East 25th Avenue, east of the railway along Pacific Boulevard from 42nd Avenue to Quarry Road in San Carlos, west of the railway from Harbor Boulevard to F Street, facing the railway across Old County Road and El Camino Real through San Carlos, along the railway between Whipple and Brewster Avenues, and west of the railway from Beech Street to Charter Street. Many of the buildings are oriented away from the railway and toward adjacent streets, limiting exposure. Engaged in work activities that limit their exposure to prolonged views from windows, commercial viewers have moderately low sensitivity. Near the Redwood City Caltrain Station are midrise commercial buildings rising up to seven stories. There is minimal landscaping in these locations to screen the railway, but viewers in these buildings have a view over the railway. Engaged in work activities that limit their exposure to prolonged views from windows, their sensitivity is moderately low.

Industrial viewers work east of the railway between the San Carlos Caltrain Station and Brittan Avenue. Few of the buildings have windows facing the railway, making exposure low. Overall, industrial viewer sensitivity is moderately low.

Retail viewers are found in the downtown districts near the San Mateo, Belmont, San Carlos, and Redwood City Caltrain Stations; along El Camino Real from East 25th Avenue south into Redwood City; east of the railway in San Carlos near Harbor and Brittan Avenues, and on both sides of the railway near Charter Street in Redwood City. With the exception of downtown Redwood City, exposure to the railway is limited by buildings shielding the retail viewers from the railway, such as in downtown San Mateo, or by the design of big-box retail buildings that draw viewers to focus on the buildings by employing oversized signage or enticing design features. For most retail viewers, exposure is moderately low. Near the Redwood City Caltrain Station, the downtown retail district opens directly on the station and railway. In that location exposure is high. Viewer sensitivity is moderate in the downtown areas where the focus of retail patrons is on the shops lining the street.

Automotive travelers' views in the San Mateo–Redwood City Landscape Unit are from the major arterials that intersect the railway or run parallel to it. Travelers passing over the railway on SR 84 and SR 92 see little of the corridor as it passes beneath them. Travelers on Peninsula, East Third, East Fourth, and Whipple Avenues have a moderately low exposure to the railway, as the roadways intersect the railway and cross at grade in these urbanized areas, so the only permanently visible features are the crossing signals and signs. In dense urban settings, travelers' sensitivity is moderate as they focus on surrounding activities. Travelers on East Hillsdale Boulevard, Ralston Avenue, Harbor Boulevard, Holly Street, and Brittan Avenue have high exposure, as the bridges carrying the railway over each of these roadways are visible from a long distance away. Travelers on these roadways also have moderately high viewer sensitivity because these streets are community gateways from US 101.

Automotive travelers also use roadways parallel to the railway. El Camino Real, along the west side of the railway from East 25th Avenue in San Mateo to Whipple Avenue in Redwood City, is the primary major north-south arterial on the Peninsula. From East 25th Avenue to the Hillsdale Caltrain Station, views to the railway are blocked by retail development but available across surface parking lots, limiting overall exposure. From the Hillsdale Caltrain Station to Whipple Avenue, views to the railway predominate, with a few intervening buildings or landscaping to block views. Exposure is moderately high. Traffic conditions, including frequent driveways and high volumes, give automotive viewers on El Camino Real moderate viewer sensitivity.

East of the railway, several streets provide a secondary north-south corridor and a continuous route from San Mateo to Redwood City that bicyclists use to avoid dangerous cycling conditions on El Camino Real. At most locations along Delaware Street, Pacific Boulevard, Old County Road, Stafford Street, Arguello Street, Winslow Street, and Middlefield Road, there are direct views to the railway, resulting in high exposure. Combined with bike lanes through San Mateo and from Ralston Avenue south, this results in moderately high viewer sensitivity for bicyclists. Class III routes on East Bellevue Avenue, Monte Diablo Avenue, 25th Avenue, East Hillsdale

Avenue, and Brittan Avenue cross the railway. Cycling in mixed traffic requires a focus on safety, limiting these cyclists' sensitivity to moderate.

Caltrain travelers have views to the adjacent landscape from the railway corridor. Viewer sensitivity varies depending on passenger activity on the train. Some passengers enjoy watching the passing landscape, resulting in moderate sensitivity. Other passengers engage in conversation, reading, or working while on the train, resulting in low sensitivity to passing views.

Visual Quality

As perceived by viewers, the San Mateo–Redwood City Landscape Unit has moderately low natural harmony and moderately high cultural order and project coherence. Overall, the existing visual quality of the San Mateo–Redwood City Landscape Unit is moderate (Table 3.15-11).

The baseline conditions with the PCEP would include OCS to power EMU trains. The OCS would be carried on individual poles, increasing the visual presence of the railway corridor, but it would not obscure views across the corridor. The overall visual quality would remain moderate under the baseline conditions.

Key Viewpoints

Table 3.15-12 shows the location, viewer group, visual character, nighttime lighting levels, and visual quality of the four KVPs in the San Mateo–Redwood City Landscape Unit. Photographs of the existing conditions at KVPs are provided in Section 3.15.6. Aerial mapping and existing and simulated views of each KVP may be found in the San Francisco to San Jose Aesthetics and Visual Quality Technical Report, Appendix B (Authority 2019a).

Table 3.15-12 Key Viewpoints in the San Mateo–Redwood City Landscape Unit

KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
7	South B Street, San Mateo	Residential viewer	▪ Moderate natural harmony—Mature trees, neat lawns, uniform landscaping ▪ Moderately high cultural order—Residences are similar style and age and in good repair; taller buildings in the background have similar colors and forms; building in foreground sits on the sidewalk and announces its nonresidential use through form and design ▪ Project environment not visible	Moderately low	Moderately high
8	El Camino Real at 39th Avenue, San Mateo	Traveler	▪ Low natural harmony—Mature trees are scattered throughout but lack relationship to one another; no other flora; no distant views. ▪ Moderately low cultural order—Wide street, no median or landscaping, narrow sidewalks, many visible utility lines, buildings spread out with no uniform design ▪ Moderately high project coherence—Project environment barely visible	Moderately high	Moderately low

KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
9	San Carlos Caltrain Station	Traveler	▪ Moderate natural harmony—Mature trees, landscaping coordinated, lush vines climb station retaining walls ▪ High cultural order—Historic San Carlos Depot building frames end of street; landscaping complements building; traffic signals design modern but do not clash with historic station ▪ High project coherence—Train platforms behind station clearly show transportation function without blocking downtown view of historic station building	Moderately high	Moderately high
10	Broadway/ Winslow Street, Redwood City	Retail viewer	▪ Moderate natural harmony—Trees in good health, but few other signs of nature in downtown district view ▪ Moderate cultural order—Large contrast in building scales; neat plaza for gateway arch, but no view into downtown district; generally uncoordinated urbanism ▪ Moderate project coherence—Grade crossing obvious, but crossing lights compete with traffic signals for visual dominance	Moderately high	Moderate

Source: *Authority 2019a*

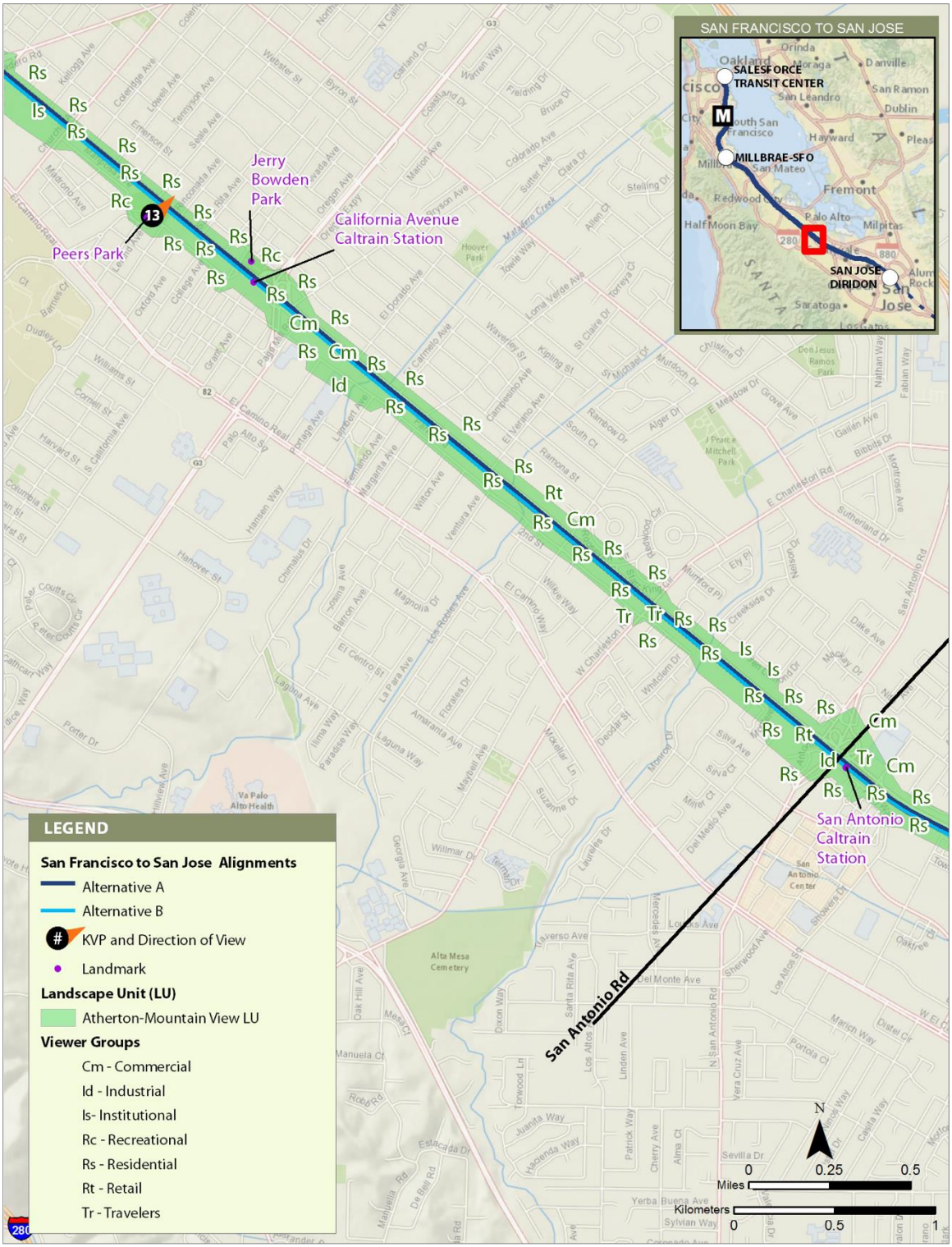
3.15.5.8 Atherton–Mountain View Landscape Unit

The Atherton–Mountain View Landscape Unit extends southeast from Fifth Avenue in Redwood City along the Caltrain railway through Atherton, Menlo Park, Palo Alto, and Mountain View to Bernardo Avenue at the Sunnyvale city limits. It extends west and east of the railway to encompass adjacent properties, including the Garfield Community School; Palo Alto High School; and Holbrook-Palmer, Burgess, El Palo Alto, El Camino, Peers, Jerry Bowden, and Rengstorff Parks. The landscape unit extent, KVP locations, visual resources, and viewer groups are illustrated on Figure 3.15-12 through Figure 3.15-14. Table 3.15-13 shows the visual resources and character and the viewer groups in the Atherton–Mountain View Landscape Unit and the overall existing visual quality.

Source: Authority 2019a

NOVEMBER 2019

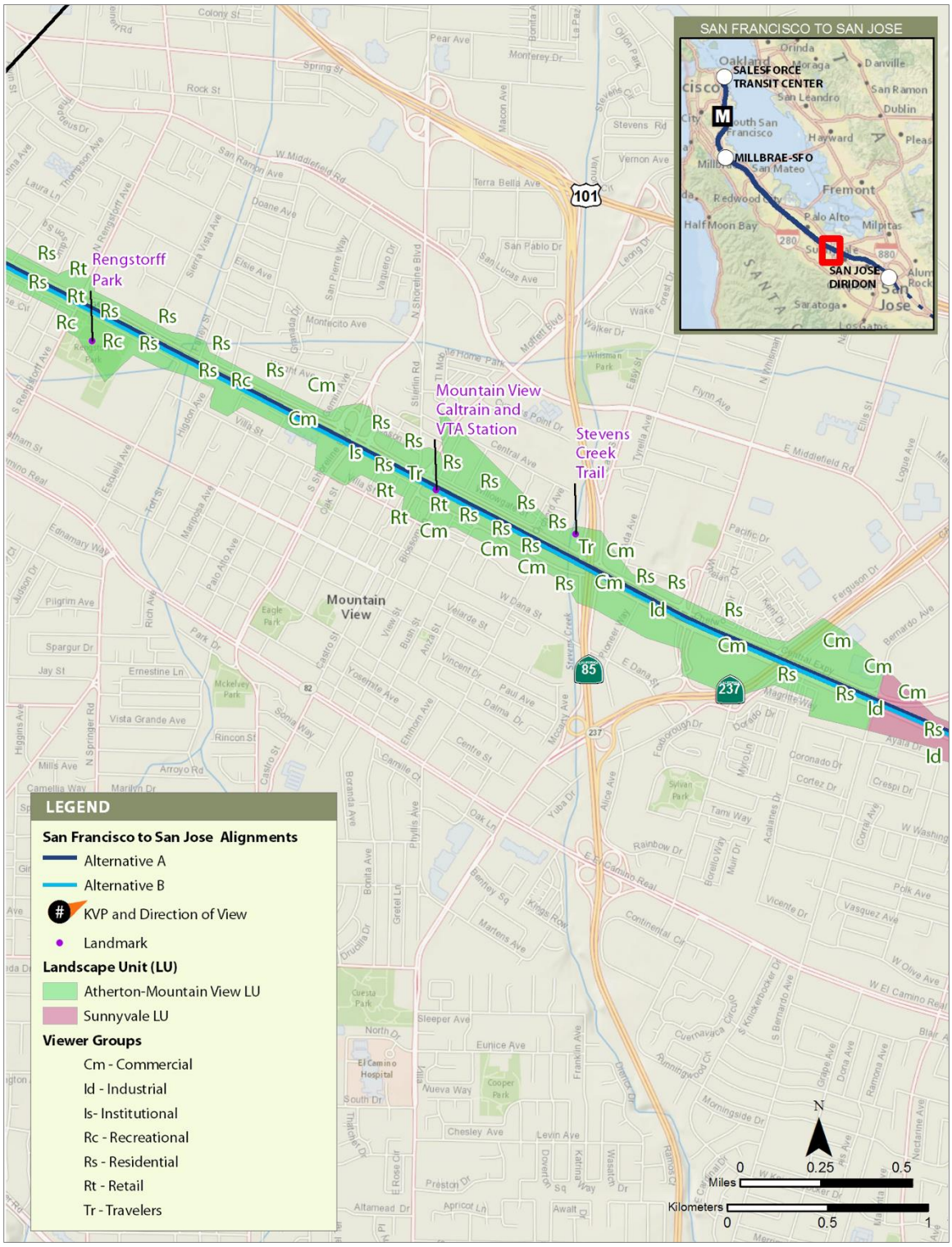
Figure 3.15-12 Key Viewpoints, Visual Resources, and Viewers—Atherton–Mountain View Landscape Unit (Northern Portion)



Source: Authority 2019a

NOVEMBER 2019

Figure 3.15-13 Key Viewpoints, Visual Resources, and Viewers—Atherton–Mountain View Landscape Unit (Central Portion)



Source: Authority 2019a

NOVEMBER 2019

Figure 3.15-14 Key Viewpoints, Visual Resources, and Viewers—Atherton–Mountain View Landscape Unit (Southern Portion)

Table 3.15-13 Atherton–Mountain View Landscape Unit Visual Character, Viewer Group Sensitivity, and Visual Quality

Existing and Baseline Visual Resources and Character			Viewer Groups and Sensitivities	Existing and Baseline Visual Quality
Natural Environment	**Cultural Environment**	**Project Environment**		
▪ Level terrain ▪ Urban vegetation ▪ San Francisquito Creek ▪ El Palo Alto ▪ Stevens Creek ▪ Good visibility	▪ Single family, 1–2 stories ▪ Multi-unit residential, 2–4 stories ▪ Industrial, single story ▪ Commercial, 2–3 stories ▪ Long-established, walkable downtowns ▪ Menlo Park and Palo Alto Train Station ▪ Holbrook-Palmer, Burgess, El Palo Alto, El Camino, Peers, Jerry Bowden and Rengstorff Parks	▪ Two-track Caltrain railway ▪ Former Atherton Caltrain Station ▪ Menlo Park Caltrain Station ▪ San Francisquito Creek Truss Bridge ▪ Palo Alto Caltrain Station ▪ Stanford Caltrain Station ▪ California Avenue Caltrain Station ▪ San Antonio Caltrain Station ▪ Mountain View Transit Center ▪ Baseline conditions would add OCS for electrification of Caltrain corridor	▪ Residents—moderately low to high ▪ Recreationists—low to high ▪ Retail viewers—low to moderately high ▪ Commercial viewers—moderately low ▪ Institutional viewers—moderately low ▪ Travelers—low to high	▪ Moderately high

Source: Authority 2019a
OCS = overhead contact system

Visual Resources and Character

The most important visual resources in the viewshed, based on analysis of aerial and satellite mapping, site surveys, and review of city and county plans and policy documents, are as follows:

- Santa Cruz Mountains—The Santa Cruz Mountains and their foothills enclose the western side of the lower San Francisco Peninsula. Their upper forested flanks contrast with the lower grass- and oak-covered foothills.
- Menlo Park Train Station—Built in 1867 by SPRR, the station (NRHP #74000556) is just north of Ravenswood Avenue, near Menlo Park's downtown district.
- El Palo Alto—California Historic Landmark #2, El Palo Alto is a coast redwood tree on the banks of San Francisquito Creek, where it serves as the symbol of both the City of Palo Alto and Stanford University.
- Palo Alto Train Station—Built in 1940 by SPRR, the station (NRHP #96000425) sits just north of University Avenue, near Palo Alto's downtown district.

Natural Environment

The natural environment of the Atherton–Mountain View Landscape Unit reflects the suburban residential development that makes up most of the landscape unit. Along most of the length of the corridor, dense landscaping—either tall, mature trees or hedges of oleander and other dense flora—has been planted to obscure views to the railway. In most neighborhoods that line the railway, the canopy of mature trees is dense. San Francisquito and Stevens Creeks remain in a relatively natural state with dense riparian landscape. Because of the dense landscaping, there are no views from the railway corridor to distant hills or the Bay.

In Atherton, tall eucalyptus and Valley Oaks with wide canopies line the railway, concealing views of residential areas. The Menlo Park Caltrain Station is set at the edge of downtown Menlo Park, where mature oaks and other trees thrive between the buildings, as in KVP 11. Between Menlo Park and Palo Alto, San Francisquito Creek crosses the railway, passing El Palo Alto, other redwoods, and oaks as it winds through the suburban landscape in a relatively natural watercourse.

Uniform street trees line the primary streets of downtown Palo Alto. West of downtown Palo Alto and the Palo Alto Caltrain station, groves of oaks and eucalyptus cover the edge of the Stanford University campus, with an alley of palms lining Palm Drive, the primary approach into the campus.

Through Palo Alto and Mountain View, the urban canopy and landscaping gradually becomes less dense, but the landscaping remains robust. Near the southern limit of the landscape unit, the railway crosses Stevens Creek. This waterway is also relatively natural, and runs in a wide greenway, preserving some of the original riparian landscape.

Cultural Environment

Residential uses predominate in the Atherton–Mountain View Landscape Unit, although there are concentrations of commercial uses around the several Caltrain stations. Parks and schools are also interspersed through the area. From the northern limit at Fifth Avenue, through the town of Atherton, to the Menlo Park Caltrain Station, the railway is lined with towering, mature trees that block most views to the railway from the adjacent single-family residential areas. In some locations, solid fences eliminate views to the tracks.

Atherton is characterized by single-story homes on large lots. The urban forest is strong and healthy, with a canopy covering much of the town. Residential development consists of sizable one-story ranch and cottage-style single-family homes, set back by front yards on large, sometimes irregularly shaped lots that are heavily landscaped. Additionally, homes are often screened by landscaping, such as trees or large hedges, or decorative walls and fences, and are not the dominant visual feature from residential streets. The area is heavily wooded and has a more rural character than many of the cities along the railway. An example of the area's rural character is the lack of sidewalks through residential neighborhoods. All development in Atherton faces away from the tracks, which are at grade. Residential streets typically end in cul-de-sacs at the railway. This street pattern has resulted in a strong neighborhood identity and a unified visual presence. The back yards of this residential area are shielded from the alignment by fencing or walls as well as dense vegetation.

There are no commercial districts in Atherton, but Garfield Community School and Holbrook-Palmer Park, adjacent to the east side of the railway, have views to the tracks. Public views of the tracks are extremely limited and are only available at at-grade crossings, the public area surrounding the former Atherton Caltrain Station, or from the train. The town's civic facilities, including the Town Hall and Library, are just west of the former Atherton Caltrain Station at Fair Oaks Lane. They resemble the architectural styles of the homes in the town and are not visually prominent.

Crossing into Menlo Park, the trees along the railway are less dense as the adjacent residential areas become denser. Residences are oriented away from the railway, with landscaping to block views to the tracks. Residential neighborhoods consist mostly of evenly spaced, one-story single-

family ranch-style homes set back by sidewalks and heavily landscaped front lawns. Homes often feature attached garages, recessed front entries and porches, low-profile landscaped screening along the perimeter of the lots, and large trees. Vegetation in the area is dense and creates a vegetative cover over most neighborhoods.

A number of the neighborhood streets terminate in cul-de-sacs, with the homes at the end of the cul-de-sac backing up to the railway. Few single-family homes front the right-of-way. Most homes, whether immediately adjacent to the right-of-way or buffered by roadways, are shielded by dense landscaping consisting of mature trees and thick shrubs. Low-density multifamily development, typically two stories high with front-facing garages at street level, is also present in these neighborhoods but is primarily concentrated along larger roadways that parallel the railway (Alma Street and Garwood Avenue). Development is largely shielded from the tracks by dense landscaping and low fences along the right-of-way. A series of at-grade crossings occur around the Menlo Park Caltrain Station. Around the station, the land use on both sides of the railway transitions to commercial uses. El Camino Real is one block west of the station. Santa Cruz Avenue runs west from the station, becoming the commercial focus of downtown Menlo Park. Adjacent to the station, development is low density and of varied style and size. Across El Camino Real to the west, Santa Cruz Avenue offers a downtown retail corridor exhibiting cohesive building frontage design, cafes, streetscapes, and landscaping, with high visual quality.

After crossing Ravenswood Avenue at grade, the railway is flanked to the east by the Menlo Park Civic Center and Burgess Park. Dense landscaping and mature trees screen the railway from the civic center and park. To the west, well-landscaped parking lots buffer the railway and commercial buildings oriented to El Camino Real. Some views are available from El Camino Real to the railway across the parking lots. Nearing San Francisquito Creek, residential uses are east of the railway, while a hotel is on the west, shielded from the railway by a hedgerow of redwoods.

The railway crosses San Francisquito Creek on a through truss bridge. The creek flows in a seminatural riparian channel, lined with redwoods, oaks, and other flora. El Palo Alto Park, home to the El Palo Alto Tree, is immediately adjacent to the east side of the Caltrain railway. Alma Street crosses the railway at grade and then turns to run south adjacent to the east side of the tracks until Sunnyvale. El Camino Park is immediately adjacent to the west side of the tracks. Trees line the edge of the park along the railway, but they are not spaced densely enough to obscure views of the railway from the park's soccer and baseball fields. Travelers on El Camino Real, just west of the park, also have views across the park to the railway.

The Palo Alto Caltrain Station hosts both a Santa Clara Valley Transportation Authority (VTA) transit center and bus bays for shuttles serving Stanford University. The station has platforms on each side of the two tracks. Mature live oaks provide shade and greenery for the station complex and nearby University Avenue/Palm Drive/El Camino Real interchange.

University Avenue connects the Stanford University campus to downtown Palo Alto. It passes under the railway station and Alma Avenue south of the depot building as it runs east to serve as Palo Alto's primary downtown street. Downtown Palo Alto's dense development provides an excellent pedestrian environment. Most buildings vary from two to four stories, although some rise to 12 stories. The downtown area is developed with closely spaced commercial and office structures built out to the sidewalk. These structures feature a number of distinctive design elements including decorated building façades, large windows and awnings, and pedestrian-scale amenities. The area is largely pedestrian oriented with several plaza areas, including Lytton Plaza, and ample landscaping. Older and distinctive structures along Ramona Street and Hamilton Avenue form the Ramona Street Architectural District. Other notable structures scattered throughout the downtown area contribute to the distinct visual character of the area. Development along Alma Street, which is immediately adjacent to and parallels the tracks to the east, consists of flat-roofed and commonly flat-faced commercial and multifamily development ranging from one to two stories. Commercial buildings along Alma Street have partial views of the railway, as dense planting along Alma Street screens many views to the railway.

South from the Palo Alto Caltrain Station to the San Antonio Station in Mountain View, most of the railway corridor is screened from view by mature trees and dense bushes. The flora on the

east side of the railway along Alma Street is dense enough to completely screen views into the railway corridor. To the west, where the railway is adjacent to commercial and residential development, the density of the flora varies, and views to the railway vary by property. Locations without screening include the Stanford Caltrain Station at Embarcadero Road, the California Avenue Station just north of Oregon Expressway, and some commercial properties south of Oregon Expressway and north of San Antonio Road.

Older, single-family, small-lot, one- to two-story residences on streets shaded by mature trees predominate east of the railway from downtown Palo Alto to East Meadow Drive. There are few views of the railway along Alma Street from the east. Residential development consists primarily of established neighborhoods made up of older, bungalow and Craftsman one- and two-story single-family homes and multifamily structures fronting tree-lined streets, set back from roadways by modest, landscaped front yards. Homes are evenly spaced and typically separated by driveways and limited screening such as low bushes or fences. Architectural features commonly seen in these neighborhoods include pitched roofs with multiple tiers, bay windows, and colorful trims around windows and building exteriors. Sidewalks are commonly bounded by low-profile landscaped screening and trees. Along the east side of the alignment, Alma Street and dense landscaping visually buffer the residential development from the tracks. South of East Meadow Drive to San Antonio Road, the land use remains residential and landscaping remains dense and mature, but the housing is newer, with few homes oriented toward Alma Street.

The Embarcadero Bike Path parallels the west side of the tracks between the Palo Alto Caltrain Station and Churchill Avenue. The land uses between the railway and El Camino Real are organized as campuses, each of which is characterized by self-contained buildings with a common architectural design, separated from each other by landscaping. South of the Palo Alto Caltrain Station is a hotel complex, set back from the railway by parking and landscaping that partially obscures views of the railway. Next is a medical campus, with maturing landscaping and structures placed to screen views of the railway corridor. The Town and County shopping center is a collection of one- and two-story commercial buildings with tile roofs and deep eaves shading the façades of the shops and restaurants from the parking area. Landscaping between the center and the railway is not dense, and there are clear views from the parking area and some shops to the railway. Embarcadero Road passes under the railway south of the shopping center. Mature trees flanking the roadway as it descends to pass under the railway and Alma Street partially obscure travelers' views to the railway from each direction.

Palo Alto High School is immediately adjacent to the Caltrain railway between Embarcadero Road and Churchill Avenue. Two classroom buildings have views to the railway, but the rest of the campus buildings are oriented away from the railway, with maintenance facilities, stadium seating, and landscaping blocking most views to the railway.

South of Churchill Avenue, single-family homes back up to the west side of the railway, with variable screening from fences and landscaping. Peers Park, midway between Churchill and California Avenues, is a large, grassy park with mature trees and landscaping, playground, and basketball and tennis courts. Trees and bushes partially screen views to the railway. The California Avenue Caltrain Station sits at the foot of the California Avenue commercial district. The station parking lot has minimal landscaping, so few views from adjacent multi-unit residential buildings to the railway are blocked.

Oregon Expressway passes under the railway south of the California Avenue Caltrain Station. The depth of the underpass and the curving alignment approaching the railway obscure most views from the road to the railway. South of the expressway, a multistory, multi-unit residential building and three small commercial buildings have clear views to the railway before the pattern of single-family and multi-unit residences backing up to the railway resumes and continues south to San Antonio Road.

San Antonio Road passes over the railway and Alma Street on a bridge. Looping highway ramps connect the roads, and Alma Street becomes the Central Expressway, a four- to six-lane divided highway with mature landscaping that runs parallel along the east side of the Caltrain railway through Mountain View into Sunnyvale. Land uses to the east are oriented away from the

expressway, with noise barriers and landscaping blocking views. These features also serve to block views to the railway from nearby commercial and residential areas to the east all the way through Mountain View.

Residential development in Mountain View alternates between single-family residential neighborhoods consisting of one- and two-story homes with front yards neatly arranged along tree-lined streets, and medium- to high-density planned, multifamily residential developments that often consist of several identical structures arranged around internal loop roads and common open space areas, surrounded by walls or landscaping. Residential neighborhoods are neatly organized, and individual homes contribute to the overall character of the single-family neighborhood through the upkeep of front yards and building exteriors.

The west side of the railway has more mixed uses. Between the San Antonio Caltrain Station and Shoreline Boulevard overcrossing, multi-unit residential developments predominate, oriented away from the railway with views partially screened by landscaping. Mature trees along the railway and along Crisanto Avenue screen views from Rengstorff Park to the railway.

Approaching the Mountain View Caltrain Station, the land uses become a mix of commercial and civic, with most buildings two to four stories with views of the railway. The Mountain View Public Safety Building is just south of the Shoreline Boulevard overcrossing. The Mountain View Transit Center is just south of the Castro Street at-grade crossing. The complex has mature trees and shelters for all transit users that feature the same design, creating a visually cohesive feel across the area. Adobe House (NHRP # 02001256), a historic structure in Mountain View, is at the intersection of Central Expressway and Castro Street and is visible from the station. Castro Street is the main street of the Mountain View downtown district, which features one- and two-story commercial and retail structures of compatible design with ornamental façades lining both sides of the streets. The area is largely pedestrian oriented with decorative streetscape, including benches, signage, lighting, and landscaped planters and medians. City Hall and Mountain Bay Plaza, both on Castro Street, are visible from the station.

Commercial land uses predominate from south of the Mountain View Station to the end of the landscape unit at Bernardo Avenue. This development often features landscaping along the sidewalks consisting of low bushes and trees, and is set back on narrow, long lots by surface parking. The actual structures are often not highly visible from roadways because parking lots and landscaping tend to be the dominant features. The Stevens Creek Trail passes over the railway just north of SR 85. Automotive travelers crossing on the bridge over West Evelyn Avenue, the Caltrain railway, VTA light rail, and Central Expressway have unobstructed views north to the Mountain View Caltrain Station. The VTA light rail runs between the Caltrain tracks and Central Expressway until turning east just south of the North Whisman Road overcrossing. SR 237 passes over West Evelyn Avenue, the Caltrain railway, and Central Expressway just before Bernardo Avenue.

Project Environment

Beginning at the north end of Atherton, the two-track Caltrain railway runs through the town with residential neighborhoods to each side. The former Atherton Caltrain Station consists of a waiting shelter. Trains no longer stop at the station, and the Town of Atherton has initiated planning to renovate the shelter to house historical materials on the history of Atherton and the railroad and to integrate the shelter and surrounding parking into the Town Center, enhancing its function as a public gathering place. The railway continues at grade through Menlo Park. The Menlo Park Caltrain Station (NRHP #74000556) is a Victorian structure with two platforms landscaped with palm trees and oaks (KVP 11).

The railway crosses San Francisquito Creek on an early 20th-century steel-truss bridge (KVP 12). The Palo Alto Caltrain Station (NRHP #96000425) is a busy transit hub, with an adjacent San Mateo County Transit District and VTA bus facility and separate crescent serving the Stanford Marguerite campus shuttle buses. The station building dates from 1941 and contains a coffee shop. The station platforms are connected by grade-separated paths that pass under the tracks alongside University Avenue. South of the station a multi-use pathway passes under the railway,

as does Embarcadero Road. There is also a special-event-only station at Embarcadero, the Stanford Caltrain Station, which provides service on football game days at the nearby Stanford Stadium.

The two-track railway continues through Palo Alto, separated from the adjacent Alma Street and residences by dense bushes. The California Avenue Caltrain Station includes two outside platforms, linked by a tunnel under the tracks. South of the station, Page Mill Expressway passes beneath the railway. Entering Mountain View, the San Antonio Caltrain Station is just south of the San Antonio Road overcrossing. The station includes two outside platforms, linked by a tunnel under the tracks.

In downtown Mountain View, the Mountain View Transit Center extends south from the Castro Street at-grade crossing, and includes two platforms for Caltrain, a platform for the terminal of the Mountain View branch of the VTA light rail, a bus transit center, a commercial building designed to resemble the former railway station, and surface parking. The complex has mature trees and shelters for all transit users that feature the same design, creating a visually cohesive feel across the area. The railway continues as two tracks to the landscape unit's southern edge at the Sunnyvale city line.

Viewer Groups

Most viewers in the Atherton–Mountain View Landscape Unit are residential, with some retail, commercial, institutional, recreational, and traveler viewers. Viewer sensitivities for each of these viewer groups, shown in Table 3.15-13, range from low to high depending on the number of viewers, their proximity to the project, and the focus of their activity.

With a few exceptions, residential development along the Caltrain railway is shielded from the railway by either fences or noise barriers and varying densities of landscaping. Tall, mature trees line the railway through Atherton and Menlo Park, obscuring views from residences.

From downtown Palo Alto to West Meadow Drive, many single-family homes face Alma Street across from the railway corridor. Residential viewers have a moderately low exposure to the railway because it is obscured by both the traffic passing on Alma Street and the dense vegetation lining the railway. Residential viewer sensitivity is moderately high, tempered by foreground views of traffic. South of West Meadow Drive through Mountain View, residences east of the railway and Alma Street/Central Expressway residences face away from the corridor, and any views to the corridor are blocked by fences, noise barriers, and mature landscaping. In these locations, residential viewers have moderate sensitivity because of the structures and landscaping blocking the roadway and railway from their view. Residences west of the railway back up to the railway, with fences or noise barriers and landscaping obscuring views. Through Palo Alto, most residences to the west are single-family homes. The density of landscaping along the railway varies by home, with most homes maintaining a dense visual barrier between their back yards and the railway. Through Mountain View, residences to the west are typically multi-unit with site designs that place parking against noise barriers and landscaping to block views to the railway. Exposure varies with the density of landscaping, but overall it is moderately low. Viewer sensitivity is moderately high. Exceptions are viewers near the California Avenue and San Antonio Caltrain Stations. Where landscaping or buildings do not block views to the railway, residential viewers have a high exposure and high viewer sensitivity.

Recreational viewers in the landscape unit use seven parks. Holbrook-Palmer Park in Atherton is immediately adjacent to the railway. A large grassy field, baseball diamond with grandstands, and six tennis courts are set behind the landscaping lining the railway. Recreational viewers in this part of the park are engaged in practice or competitive activities, so their focus is on their sport, not the surrounding environment, and their sensitivity is moderately low. Recreationists deeper in the park have views to the railway obscured by distance, landscaping, and the sports facilities, so their exposure is low and sensitivity moderate.

Burgess Park in Menlo Park lies across Alma Street from the Caltrain railway. Mature oaks line the railway, obscuring views. There is a small picnic area with shaded tables in the center of the park, surrounded by sports facilities. Populated by active recreationists and spectators, exposure

is low and viewer sensitivity moderate. El Camino Park, 0.5 mile away in Palo Alto, shares the same characteristics.

El Palo Alto Park is immediately east of the railway on the south bank of San Francisquito Creek. It is a small park surrounding El Palo Alto, the ancient redwood that is the symbol of both Palo Alto and Stanford University. Recreationists come to the park to observe the tree and riparian flora. There are clear views to the railway truss bridge over the creek. Exposure is high, as is sensitivity, because this park attracts people based on the natural setting and landmark tree.

Peers Park is heavily wooded with mature trees. A basketball and two tennis courts sit in the middle of the park, flanking a playground. Recreationists have obscured views through the park's trees lining the railway, resulting in a moderately low exposure. Sensitivity varies with activity—moderate for people engaged in sports and moderately high for passive recreationists.

Jerry Bowden Park is on Alma Street across from the California Avenue Caltrain Station. The northbound Caltrain station platform has no setback from Alma Street and no landscaping. Exposure from the park is high. The park is designed primarily for passive recreation, so viewer sensitivity of the recreationists is moderately high.

Rengstorff Park is set back from the west side of the railway by Crisanto Avenue. Mature landscaping forms a dense hedge, blocking views from the park to the railway, resulting in low exposure. The park includes a swim complex, playground, basketball courts and other sporting facilities. Active recreationists have moderate viewer sensitivity.

Retail viewers are concentrated on the landscape unit's downtown streets: El Camino Real and Santa Cruz Avenue west of the Menlo Park Caltrain Station, University Avenue east of the Palo Alto Caltrain Station, California Avenue west of the California Avenue Caltrain Station, and Castro Street west of the Mountain View Caltrain Station. These downtown streets attract the most pedestrian activity. Each street's retail uses end at the railway, so exposure is moderately high, but the focus of retail patrons is on the shops lining the street, so sensitivity is moderately low. Retail viewers also frequent the Town and Country Center, west of the railway at Embarcadero Road. This retail area is automobile focused and immediately adjacent to the railway, but most shops are in buildings facing away from the railway, so exposure is low. Most retail viewers are focused on safely navigating within the parking lot, so their viewer sensitivity is low.

Commercial viewers are found primarily east and south of the Palo Alto Caltrain Station and west of the railway south of the Mountain View Caltrain Station. Most buildings are oriented away from the railway, limiting exposure. Engaged in work activities that limit their exposure to prolonged views through windows, their sensitivity is moderately low.

Palo Alto High School's students and staff are institutional viewers. Most classroom buildings are separated from the railway by recreational facilities and maintenance buildings. Students and staff in the classrooms are shielded from views of the railway, so their sensitivity is moderately low. Students engaged in sports have limited exposure to the railway because the football stands line the railway. Because the sporting participants and any fans are engaged in practice or competition activities, their focus is on their sport, not the surrounding environment, so their sensitivity is moderately low.

Automotive travelers' views in the Atherton–Mountain View Landscape Unit are from the major arterials that intersect the railway. Travelers on Ravenswood Avenue, Alma Street, West Charleston Road, and South Rengstorff Avenue all have high exposure to the railway, as congested conditions provide opportunities for long waits near the at-grade crossings. These are primary routes, so automotive traveler sensitivity is moderately high. Motorists on Alma Street/Central Expressway running parallel to the railway have high exposure not because of clear views to the railway, but because of the length of time they travel adjacent to the railway. With narrow lanes on Alma Street and high speeds on Central Expressway, these viewers are focused on traffic conditions, resulting in moderate viewer sensitivity.

The Class I Stevens Creek Trail crosses over the railway and Evelyn Avenue just north of SR 85. Cyclists have views up the railway to the north from the bridge, with views to the south blocked by

the SR 85 freeway bridges. Views to the railway are perpendicular to the paths of travel for cyclists on the bridge, enclosed by the bridge's truss structure and safety screen, resulting in low exposure. Cyclists riding on a protected Class I trail have moderately high viewer sensitivity passing over the bridge.

Class II bike lanes run on Alma Street immediately adjacent to the railway from Ravenswood Avenue in Menlo Park to Lytton Avenue in Palo Alto on a bike bridge across San Francisquito Creek. In most locations, there are obscured views through landscaping to the railway, resulting in moderate exposure. Class II lanes on Evelyn Avenue run south from the Mountain View Caltrain Station into Sunnyvale. North of SR 85, views to the railway are obscured by landscaping and vehicles in the Mountain View Caltrain station parking lot and a trio of commercial buildings. South of SR 85, Evelyn Avenue runs immediately adjacent to the railway. The median and verge between the street and railway are planted with rows of young trees. This vegetation obscures most views at automotive speeds, but slower cyclists have moderately high exposure to the railway. Class II bike lanes on Glenwood Avenue, Alma Street, Churchill Avenue, West Meadow Drive, West Charleston Avenue, and Rengstorff Avenue cross the railway at grade, providing moderate exposure through long views leading toward each grade crossing. Riding in bike lanes with less need to focus on automobile traffic, cyclists have moderate viewer sensitivity.

Pedestrians are abundant around the Palo Alto and Mountain View Caltrain Stations, with peak flows influenced by Caltrain arrivals and departures. Many pedestrians are transferring to transit, waiting for an auto pick-up, or walking to their destination. The Marguerite Shuttle, serving Stanford University, has a number of stops immediately adjacent to the southbound platform at the Palo Alto Caltrain Station. VTA buses stop adjacent to the southbound platform at the Mountain View Caltrain Station, with VTA light rail adjacent to the northbound platform. Most pedestrians are regular commuters. With crowded pedestrian conditions around the station at peak hours and pedestrians focused on reaching scheduled transportation, viewers are moderately sensitive.

Caltrain travelers have views to the adjacent landscape from the railway corridor. Viewer sensitivity varies depending on passenger activity on the train. Some passengers enjoy watching the passing landscape, resulting in moderate sensitivity. Other passengers engage in conversation, reading, or working while on the train, resulting in low sensitivity to passing views.

Visual Quality

As perceived by viewers, the Atherton–Mountain View Landscape Unit has moderately high natural harmony, cultural order, and project coherence. Overall, the existing visual quality of the Atherton–Mountain View Landscape Unit is moderately high (Table 3.15-13).

The baseline conditions with the PCEP would include OCS to power EMU trains. The OCS would be carried on individual poles, increasing the visual presence of the railway corridor, but it would not obscure views across the corridor. The overall visual quality would remain moderately high under the baseline conditions.

Key Viewpoints

Table 3.15-14 shows the location, viewer group, visual character, nighttime lighting levels, and visual quality of the three KVPs in the Atherton–Mountain View Landscape Unit. Photographs of the existing conditions at KVPs are provided in Section 3.15.6. Aerial mapping and existing and simulated views of each KVP may be found in the San Francisco to San Jose Aesthetics and Visual Quality Technical Report, Appendix B (Authority 2019a).

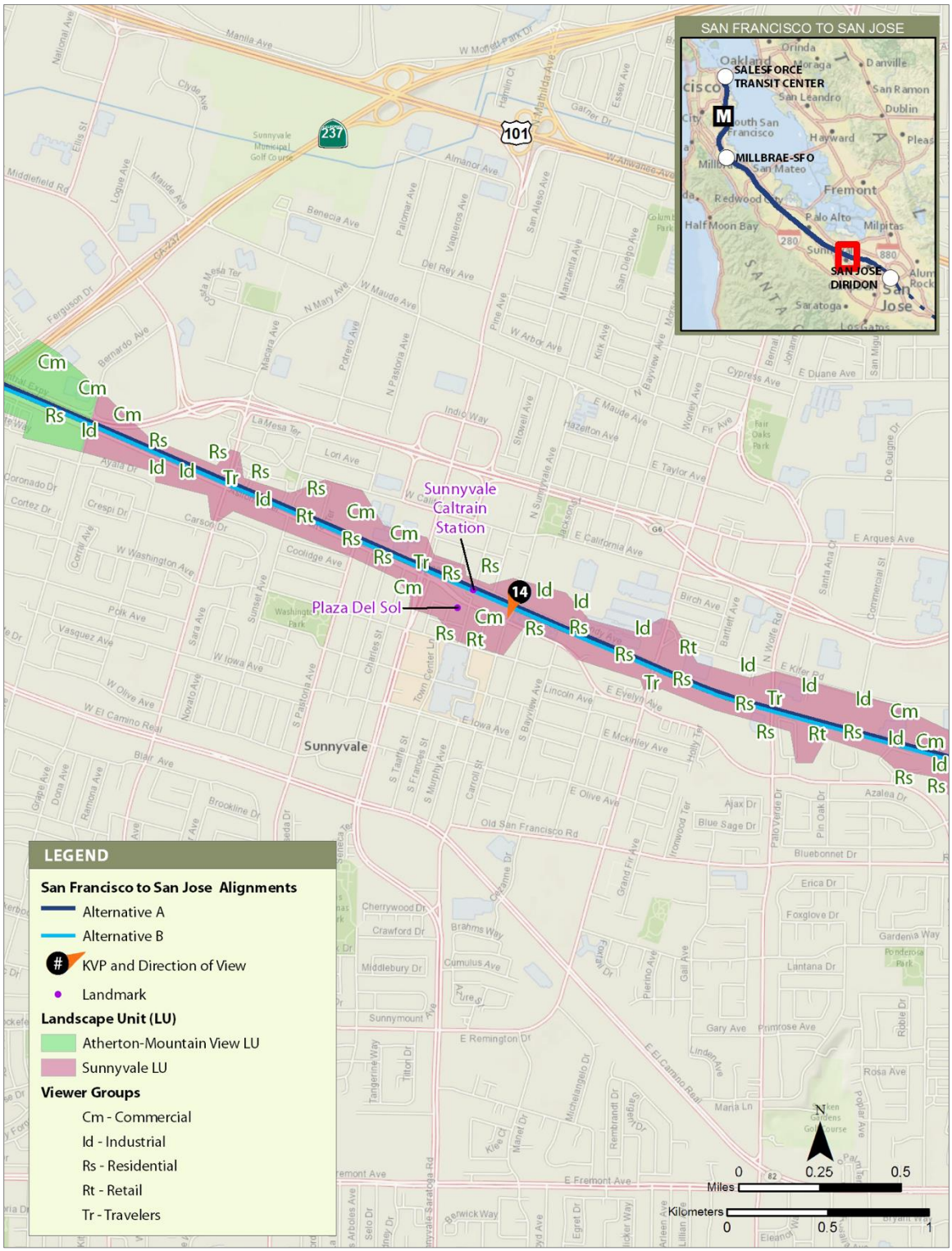
Table 3.15-14 Key Viewpoints in the Atherton–Mountain View Landscape Unit

KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
11	Menlo Park Caltrain Station	Retail and commercial viewer	▪ Moderately high natural harmony—Many mature and diverse trees frame the historic Menlo Park station building; neat landscaping borders parking areas and streets ▪ Moderate cultural order—Clock tower and station signify station's cultural position but parking dominates the view ▪ Moderately high project coherence—Station location clearly evident by clock tower and station building	Moderately low	Moderately high
12	El Palo Alto	Recreational viewer	▪ High natural harmony—Mature redwoods and riparian flora dominate the view; most of the ground is soft and natural ▪ Moderately high cultural order—Landmark plaque for historic tree set into stone to reinforce natural setting; pedestrian-scaled bridge and light appropriate for trail setting ▪ Moderately high project coherence—Archetypal truss bridge and twin tracks give impression of busy railway	Low	Moderately high
13	Peers Park, Palo Alto	Recreational viewer	▪ High natural harmony—Mature trees, dense shrubbery, grass in good condition but exhibits wear from sports use ▪ Moderately high cultural order—Sports, picnic, and tennis zones in park clearly defined and complementary ▪ Project environment not visible	Low	High

Source: *Authority 2019a*

3.15.5.9 Sunnyvale Landscape Unit

The Sunnyvale Landscape Unit extends east from Bernardo Avenue along the Caltrain railway to Scott Boulevard in Santa Clara. It extends west and east of the railway to encompass adjacent properties, including Bracher Park. The landscape unit extent, KVP locations, visual resources, and viewer groups are illustrated on Figure 3.15-15 and Figure 3.15-16. Table 3.15-15 shows the visual resources and character and the viewer groups in the Sunnyvale Landscape Unit and the overall existing visual quality.



Source: Authority 2019a

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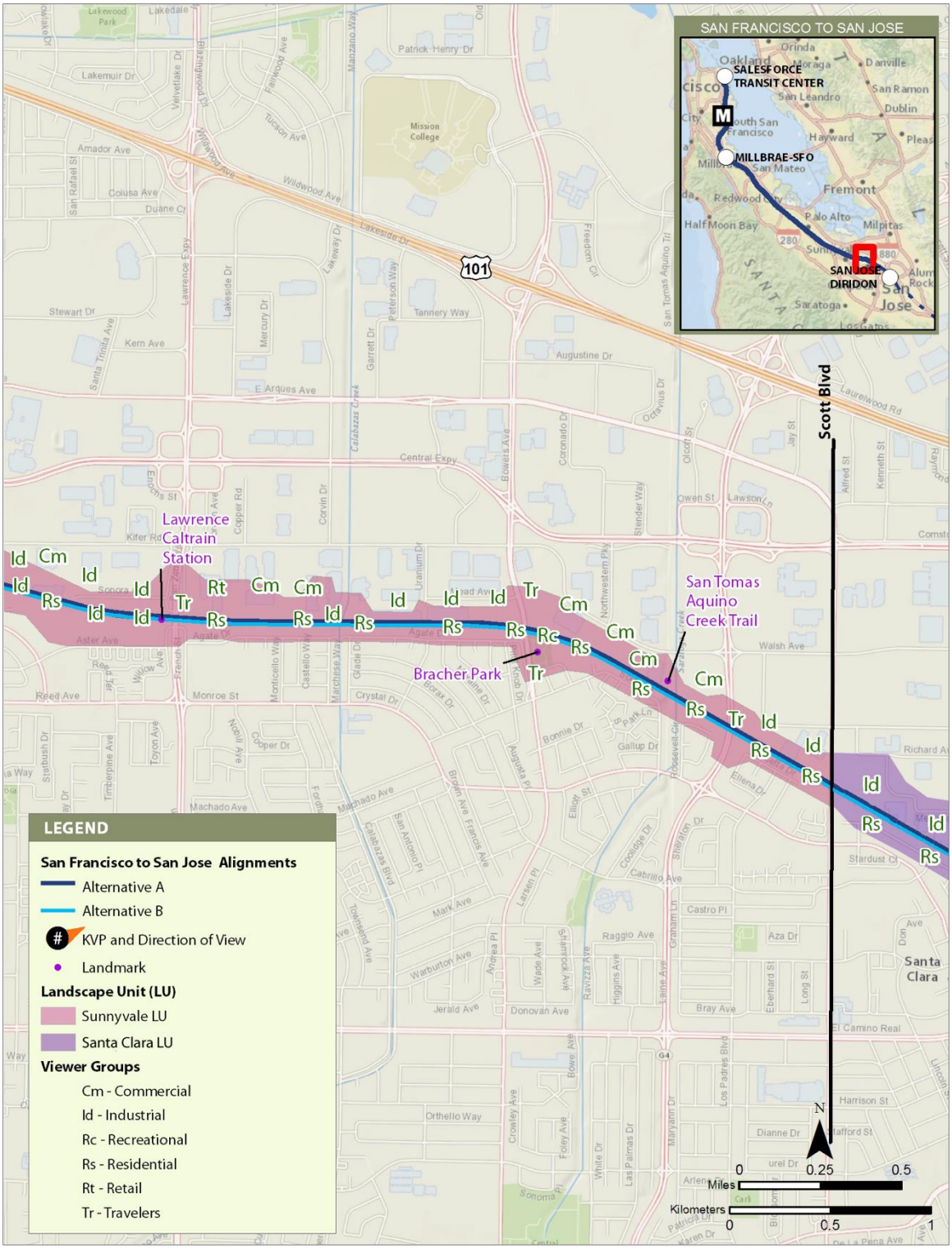
Figure 3.15-15 Key Viewpoints, Visual Resources, and Viewers—Sunnyvale Landscape Unit (Northern Portion)



Source: Authority 2019a

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Figure 3.15-16 Key Viewpoints, Visual Resources, and Viewers—Sunnyvale Landscape Unit (Southern Portion)

Table 3.15-15 Sunnyvale Landscape Unit Visual Character, Viewer Group Sensitivity, and Visual Quality

Existing and Baseline Visual Resources and Character			Viewer Groups and Sensitivities	Existing and Baseline Visual Quality
Natural Environment	Cultural Environment	Project Environment		
▪ Level terrain ▪ Urban vegetation ▪ Background views of mountain ranges ▪ Moderate visibility ▪ No major water features	▪ Single family, 1–2 stories ▪ Multi-unit residential, 2–4 stories ▪ Industrial, single story ▪ Commercial, 2–3 stories ▪ Bracher Park ▪ Downtown Sunnyvale	▪ Two- to four-track Caltrain railway ▪ Sunnyvale Caltrain Station ▪ Lawrence Caltrain Station ▪ Baseline conditions would add OCS for electrification of Caltrain corridor	▪ Residential viewers—moderately high ▪ Recreational viewers—high ▪ Commercial viewers—moderately low ▪ Industrial viewers—moderately low ▪ Travelers—low to moderately high	▪ Moderate

Source: Authority 2019a
OCS = overhead contact system

Visual Resources and Character

The most important visual resources in the viewshed, based on analysis of aerial and satellite mapping, site surveys, and review of city and county plans and policy documents, are as follows:

- Santa Cruz Mountains—The Santa Cruz Mountains and their foothills enclose the western side of the Santa Clara and Coyote Valleys. Their forested flanks contrast with the grass- and oak-covered eastern hills and provide orientation for the valley.
- Mount Hamilton, Lick Observatory, and the Diablo Range—East of the Santa Clara Valley, the high, undeveloped mountains covered in grasses, chaparral, and oak provide views of wilderness from throughout the area. Atop Mount Hamilton, the Lick Observatory, operated by the University of California, is a landmark visible from throughout the region.

Natural Environment

The natural environment of the Sunnyvale Landscape Unit reflects the history of development in the area, which was built upon former orchards. The terrain is completely level and devoid of any original flora. All landscaping was planned, planted, and maintained to support the varied land uses in the area. Oleander and other flowering bushes line the existing railway. Maturing redwoods enclose the traffic lanes of the Central Expressway where it parallels the railway. Short but mature trees decorate older single-family residential areas, but are not of appropriate species or density to provide a substantial canopy. Some larger evergreens and deciduous trees form groves or hedgerows to shade commercial office buildings' parking lots or multi-unit residential complexes.

The landscape provides views to the Santa Cruz Mountains and Diablo Range when the air quality is good. There are no natural waterways in the area, but the wide, concrete-lined channel of San Tomas Aquino Creek and the adjacent multi-use trail permits people to hike great distances with a reminder of the natural route of water from the foothills to the Bay.

Cultural Environment

Through the Sunnyvale Landscape Unit there is a mix of residential, industrial, and commercial uses. East of the railway, the land use is industrial and commercial, with few exceptions. There is a mobile home community north of the Mary Avenue at-grade crossing and a dense multi-unit residential community south of Mary Avenue. Each community is visually screened from the

railway by noise barriers and landscaping, including mature trees. An older neighborhood of primarily single-family homes east of the Sunnyvale Caltrain Station has partial views to the railway between rows of mature trees.

The predominantly industrial landscape on the east side of the railway is characterized by tall, single-story, boxy industrial structures and warehouses, oriented around utility and storage areas with minimal landscaping. The buildings have few windows but large doors. Some buildings once had loading facilities right on the railway, with signs of abandoned and removed rail sidings for freight access.

The commercial buildings rise up to four stories, surrounded by large surface parking lots. Development is typically oriented around roadways that dead end or cul-de-sac at the railway. Parking areas tend to be landscaped with maturing trees. The landscaping partially obscures views to the railway.

On the west side of the railway, land uses are more mixed. Evelyn Avenue runs immediately adjacent to the railway from Bernardo Avenue to the Mathilda Avenue overcrossing in downtown Sunnyvale. A thick hedge of oleander between the railway and roadway blocks views from the commercial and residential areas on the west side of Evelyn Avenue.

The Sunnyvale Caltrain Station is between the Mathilda Avenue overcrossing and Sunnyvale Avenue at-grade crossing. Downtown Sunnyvale is west of the station across Evelyn Avenue. The downtown area has two distinct scales. The northern blocks, between Mathilda Avenue and Frances Street, are newer commercial and residential buildings, rising up to six stories, around Plaza del Sol. The plaza is a concrete- and brick-surfaced open space, with small trees at its edges and a metal canopy circling its southern edge along Frances Street. South of Frances Street is Sunnyvale's downtown, with one- to two-story commercial buildings along Murphy Avenue. Murphy Avenue, shaded by mature trees, is lined with retail and restaurants that generate pedestrian activity in the area. Views to the railway are blocked by the Murphy Square commercial complex, which sits at the foot of Murphy Avenue, terminating views with a small, landscaped plaza surrounded by a three-story Monterey Colonial/Spanish Revival-style commercial building.

Between the Sunnyvale and Lawrence Stations, multi-unit residential uses predominate, with pockets of industrial activities. Clusters of newer, single-family and multifamily planned residential communities and neighborhoods consisting of one- and two-story housing units are along the alignment. In the planned communities, series of similarly or identically designed buildings are oriented along internal roadways and common open-space areas. These communities are often contained by a landscaped perimeter or walls. Noise barriers and mature landscaping block most views from residences to the tracks, although in taller buildings, residents on upper floors can see over the barriers to the tracks. At the Fair Oaks overcrossing, Caltrain expands from two to four tracks, allowing through trains to bypass the platforms at Lawrence Station. South of Fair Oaks, there are no public streets adjacent to the railway, limiting views to buildings immediately adjacent to the right-of-way.

The Lawrence Caltrain Station is located where the Lawrence Expressway bridges the railway. East of the railway, commercial and retail buildings border the station but do not have direct access. West of the railway, a concrete block manufacturing facility borders the station north of the overpass, accessed by a single railway spur track for deliveries of materials. The facility is bordered by residential uses. Immediately south of the overpass are two- to four-story multi-unit residential buildings, oriented away from the railway. The railway returns to a two-track configuration near Bowers Avenue.

South of Lawrence Station, the neighborhoods west of the Caltrain railway typically consist of small-lot, one- and two-story single-family homes with small front yards set back from partially tree-lined streets. Most residential development backs up to the tracks and is buffered by low fencing and landscaping, which screens the tracks from view from most residential neighborhoods. Manicured front lawns and low-profile landscaped screening are a common characteristic in most neighborhoods, while in some neighborhoods low fences are located at the sidewalk, and homes are set back by front yards and covered stoops. The extent of the landscaping along sidewalks varies by neighborhood.

Bracher Park is just south of the Bowers Avenue underpass. The park has a broad lawn, playground, basketball court, and mature landscaping, but there is no landscaping to block views of the adjacent railway. The tracks can be seen through the park by travelers passing on the fronting street. Multi-unit residential uses line the west side of the railway between the park and San Tomas Aquino Creek. Landscaping, parking, and noise barriers obscure views to the railway from the residences. San Tomas Aquino Creek is a narrow concrete channel with an adjacent multi-use trail, which descends to creek level to pass under the railway. Recreationists along the trail have clear views to the railway as they approach because there is no landscaping along the channel. The landscape unit ends at the Scott Boulevard overcrossing, just south of the creek.

Project Environment

The railway enters the landscape unit just south of the SR 237 overcrossing. The two-track railway parallels West Evelyn Avenue toward downtown Sunnyvale. The Sunnyvale Caltrain Station is between the Mathilda Avenue overcrossing and Sunnyvale Avenue grade crossing. The station consists of platforms outside the two tracks, a small surface parking lot, and a four-story parking structure enhanced with a clock tower and glass arch sheltering ticketing machines. The station area is landscaped with maturing trees, obscuring views of the railway from the west and east. Downtown Sunnyvale is west of the station across Evelyn Avenue. Views to the railway are blocked by the Murphy Square commercial complex, which sits at the foot of Murphy Avenue, terminating views with a small, landscaped plaza surrounded by a three-story Monterey Colonial/Spanish Revival-style commercial building. After crossing Sunnyvale Avenue at grade, the railway expands from two to four tracks.

The Lawrence Caltrain Station is located where the Lawrence Expressway bridges the railway. The station's platforms sit outside the four tracks, extending to both sides of the expressway overcrossing. Ramps and stairs leading down to a crossover beneath the railway are north of the overcrossing. There are contemporary, pitched-roof, glass-walled waiting areas on each platform, both north and south of the overcrossing. Maturing trees landscape the station area. East of the railway, commercial and retail buildings border the station but do not have direct access. West of the railway, a concrete block manufacturing facility borders the station north of the overpass, with a single railway spur track for deliveries of materials. The railway returns to a two-track configuration near Bowers Avenue.

Viewer Groups

Viewers in the Sunnyvale Landscape Unit are primarily commercial and residential, with some industrial, recreational, and traveling viewers. Viewer sensitivities for each of these viewer groups, shown in Table 3.15-15, range from low to high depending on the number of viewers, their proximity to the project, and the focus of their activity.

Residential viewers are found all along the Caltrain railway through the landscape unit. Near Mary Avenue, views from residences on the east side are blocked by noise barriers, berms, and dense landscaping, resulting in low visual exposure. Along West Evelyn Avenue, north of Mathilda Avenue, residential views are blocked by dense hedges along the railway, resulting in low exposure. Residences east of the Sunnyvale Caltrain Station have partial views of the railway through widely spaced mature trees, resulting in moderate exposure. South of downtown Sunnyvale, single- and multi-unit residences back up to the railway, with landscaping, fencing, and parking partially blocking views to the railway, resulting in moderately low exposure. Overall residential viewer sensitivity is moderately high, tempered by views of commercial and industrial uses across the railway corridor that impinge upon the residential character of the environment.

Bracher Park, immediately east of the railway on the south side of Bowers Avenue, is ringed with mature trees and features a large lawn, basketball court, and playground. There are clear views into the Caltrain railway from the park, giving recreationists high exposure. While there is a basketball court and playground, most of the park is designed for passive recreation, resulting in high viewer sensitivity.

Commercial viewers occur along the railway in single-story buildings on West Evelyn Avenue, from Mountain View to South Pastoria Avenue. Views are blocked by dense hedges along the

railway, resulting in low exposure. Multistory commercial buildings are found primarily east of the Caltrain railway. Many of the buildings are oriented away from the railway and toward adjacent streets, limiting exposure. There is often maturing landscaping in these locations to screen the railway, but viewers in these buildings have a view over the railway. Engaged in work activities that limit their exposure to prolonged views from windows, their sensitivity is moderately low.

Industrial viewers are concentrated east of the railway near Sunnyvale Avenue and Bowers Avenue. The industrial buildings adjacent to the railway are one story, often fronting on adjacent streets with storage facilities adjacent to the railway. Few buildings have windows facing the railway, resulting in low exposure. Just north of the Lawrence Caltrain Station on the west side of the railway, there is a concrete and stone facility with activities taking place outdoors with a view of the railway. Industrial workers are engaged in activities where safety is a concern, such as unloading gravel from railcars, and focus on their work, limiting exposure to the surrounding environment. Overall, industrial viewer sensitivity is moderately low.

Automotive travelers' views in the Sunnyvale Landscape Unit are from the major arterials that cross the railway. There are only two at-grade crossings—Mary Avenue and North Sunnyvale Avenue. Travelers on these roadways have moderate exposure to the railway, as passing trains provide opportunities for waits at the railway at-grade crossing while gates are down. Evelyn Avenue is immediately adjacent to the railway from Mountain View to Mathilda Avenue. A dense hedge of oleander, bottlebrush, and other flora blocks views to the railway, resulting in low exposure. All these roadways serve local travelers, so their viewer sensitivity is moderately high.

The Class I San Tomas Aquino Creek Trail passes under the Caltrain railway along the north bank of the creek. Cyclists approaching the railway have high exposure because nothing screens the view of the railway from the trail. Cyclists riding on the protected Class I trail have moderately high viewer sensitivity.

Class II bike lanes run on Evelyn Avenue immediately adjacent to the railway from Mountain View to the Sunnyvale Caltrain Station. A dense hedge of oleander, bottlebrush, and other flora blocks views to the railway, resulting in low exposure. Class II bike lanes on South Fair Oaks Avenue and South Wolfe Road cross over the railway on roadway bridges. Views to the railway are perpendicular to the paths of travel for cyclists on the bridge, resulting in moderately low exposure. Bowers Avenue crosses beneath the railway, resulting in moderately high exposure through long views leading toward the underpass. Riding in bike lanes with less need to focus on automobile traffic results in moderate sensitivity for bicyclists.

Caltrain travelers have views to the adjacent landscape from the railway corridor. Viewer sensitivity varies depending on passenger activity on the train. Some passengers enjoy watching the passing landscape, resulting in moderate sensitivity. Other passengers engage in conversation, reading, or working while on the train, resulting in low sensitivity to passing views.

Visual Quality

As perceived by viewers, the Sunnyvale Landscape Unit has moderately low natural harmony, a moderate cultural order, and a moderately high project coherence. Overall, the existing visual quality of the Sunnyvale Landscape Unit is moderate (Table 3.15-15).

The baseline conditions with the PCEP would include OCS to power EMU trains. The OCS would be carried on individual poles, increasing the visual presence of the railway corridor, but it would not obscure views across the corridor. The overall visual quality would remain moderate under the baseline conditions.

Key Viewpoints

Table 3.15-16 shows the location, viewer group, visual character, nighttime lighting levels, and visual quality of the KVP in the Sunnyvale Landscape Uni. Photographs of the existing conditions at KVPs are provided in Section 3.15.6. Aerial mapping and existing and simulated views of each KVP may be found in the San Francisco to San Jose Aesthetics and Visual Quality Technical Report, Appendix B (Authority 2019a).

Table 3.15-16 Key Viewpoints Representing the Sunnyvale Landscape Unit

KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
14	Sunnyvale Avenue, east of Caltrain railway	Traveler	▪ Moderate natural harmony—Little flora beyond varied trees; atmospheric conditions can obscure views of distant Santa Cruz Mountains ▪ Moderate cultural order—Illegally parked cars on the street, trailer or shed over low fence, residential building overlook railway, signs of jumbled cultural order ▪ Moderate project coherence—Caltrain corridor is identified by the crossing gates, but traffic signals dominate the view	Moderately low	Moderate

Source: *Authority 2019a*

3.15.5.10 Santa Clara Landscape Unit

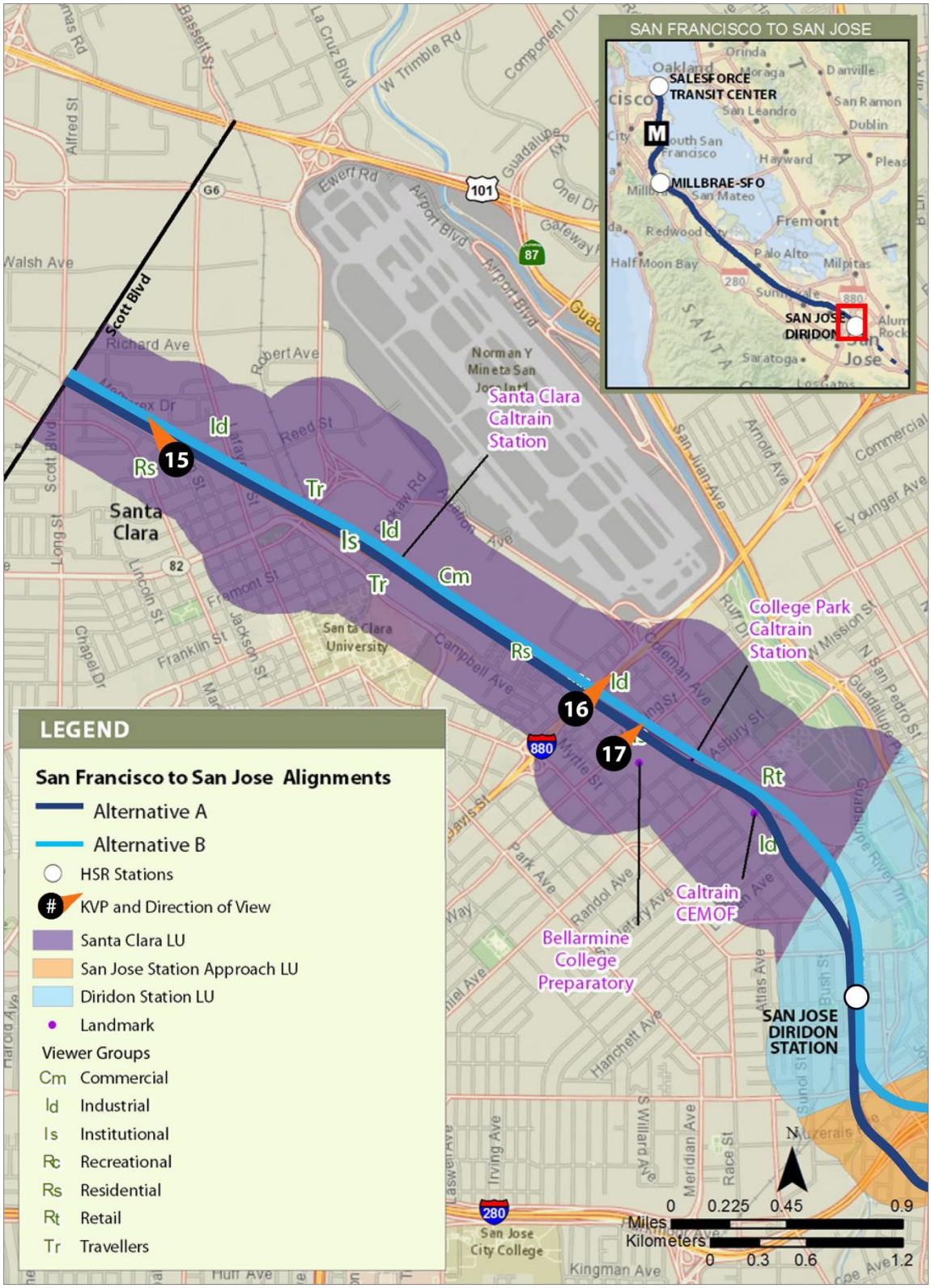
The Santa Clara Landscape Unit (Figure 3.15-17) extends southeast from Scott Boulevard in Santa Clara along the Caltrain railway to West Julian Street in San Jose. It extends west and east of the railway to encompass adjacent properties, including the transit facilities at the Santa Clara Caltrain Station and the Bellarmine College Preparatory campus. The landscape unit extent, KVP locations, visual resources, and viewer groups are illustrated on Figure 3.15-17. Table 3.15-17 shows the visual resources and character and the viewer groups in the Santa Clara Landscape Unit and the overall existing visual quality.

Table 3.15-17 Santa Clara Landscape Unit Visual Character, Viewer Group Sensitivity, and Visual Quality

Existing and Baseline Visual Resources and Character			Viewers Groups Sensitivity	Existing and Baseline Visual Quality
Natural Environment	Cultural Environment	Project Environment		
▪ Level terrain ▪ Urban vegetation ▪ Background views of mountain ranges ▪ Moderate visibility ▪ No major water features	▪ Single family, 1–2 stories ▪ Multi-unit residential, 2–4 stories ▪ Industrial, single story ▪ Commercial, 2–3 stories ▪ Santa Clara Caltrain Station ▪ Reed Street Dog Park ▪ Reed and Grant Streets Sports Park ▪ Larry J. Marsalli Park ▪ Newhall Park ▪ Bellarmine College Preparatory ▪ Passenger and freight railroad storage	▪ Two-track Caltrain railway ▪ Multitrack Caltrain/UPRR ▪ Santa Clara Railroad Historical Complex ▪ College Park Caltrain Station ▪ CEMOF ▪ Baseline conditions would add OCS for electrification of Caltrain corridor	▪ Residential viewers—low to high ▪ Recreational viewers—moderately low ▪ Retail and commercial viewers—moderately low ▪ Industrial viewers—moderately low ▪ Institutional viewers—moderately low ▪ Travelers—moderately low	▪ Moderately high

Source: Authority 2019b
CEMOF = Centralized Equipment Maintenance and Operations Facility

OCS = overhead contact system
UPRR = Union Pacific Railroad



Source: Authority 2019b NOVEMBER 2019

Figure 3.15-17 Key Viewpoints, Visual Resources, and Viewers—Santa Clara Landscape Unit

Visual Resources and Character

The notable visual resources and scenic vistas within and that may be seen from the Santa Clara Landscape Unit, based on analysis of aerial and satellite mapping, site surveys, and review of city and county general plans and other policy documents, are as follows:

- Santa Cruz Mountains—The Santa Cruz Mountains and their foothills enclose the western side of the Santa Clara and Coyote Valleys and are visible in the background of views from the RSA. Their forested flanks contrast with the grass- and oak-covered eastern hills and provide orientation for the valley.
- Mount Hamilton, Lick Observatory, and the Diablo Range—East of the Santa Clara Valley, the high, undeveloped mountains covered in grasses, chaparral, and oak provide views of wilderness in the background of views from the RSA. Atop Mount Hamilton, the Lick Observatory, operated by the University of California, is a landmark visible from throughout the region.
- Santa Clara Railroad Historical Complex (Santa Clara Caltrain Station)—The Santa Clara Railroad Depot (NRHP #85000359), built in 1863, is the oldest operating railroad depot in California. The depot building hosts a railroad library and museum while still serving its original function as a passenger depot. The depot and associated railway buildings were added to the NRHP in 1985. It is located at 1001 Railroad Avenue, just southwest of the Caltrain railway.

Natural Environment

The natural environment comprises vegetation associated with residential landscaping. The extent of vegetation in residential areas ranges from mature trees that create shaded areas to small trees along roadways. Most homes have some form of low-scale (low-height) landscaping along property perimeters. Minimal landscaping exists along roadways and in designated parking areas in industrial areas. Most street trees and landscaping are in good health.

When air quality is good, background views providing scenic vistas to the Diablo Range and Mount Hamilton are common to the south and east. Few views of the Santa Cruz Mountains are available because of the density of development.

Cultural Environment

Residential and industrial uses predominate throughout the landscape unit. These residential and industrial uses border the project environment—the existing rail corridor that roughly transects the middle of the landscape unit. East of the Caltrain railway, the cultural environment comprises industrial development, with the exception of a retail center at the southern end of the landscape unit and the San Jose Earthquakes soccer stadium just north of I-880. These areas are characterized by low-rise, boxy industrial structures and warehouses surrounded by large surface parking lots. Development is typically oriented around roadways that dead end or cul-de-sac at the railway. Consequently, industrial development rarely fronts the right-of-way and is typically separated from the tracks by minimal setbacks or utility yards.

The residential areas west of the railway are visually distinct neighborhoods. On the west side residential use predominates, with single-family homes north of Lafayette Street and multi-unit development north of I-880. Lafayette Street neighborhoods typically consist of small-lot, one- and two-story single-family homes with small front yards set back from partially tree-lined streets. These homes commonly feature pitched roofs, attached garages fronting the street, and recessed doorways at building frontages. Most residential development backs up to the Caltrain tracks and is screened from view by low fencing and landscaping.

The multi-unit neighborhoods in San Jose south of the Santa Clara Caltrain Station consist primarily of contemporary row houses of up to four stories on narrow streets. Noise barriers line the corridor in this area, blocking street views to the railway. Newhall Park, just north of I-880, is lined on two sides by row houses, but it has a view of the railway corridor past the Newhall Street cul-de-sac. In San Jose's College Park neighborhood south of I-880, the Bellarmine College Preparatory campus abuts the Caltrain railway and straddles Hedding Street, with the classrooms shielded from the railway by parking, the football stadium, and baseball diamond.

The southern portion of the landscape unit contains Caltrain's Centralized Equipment Maintenance and Operations Facility (CEMOF) and a retail center consisting of one- and two-story big-box retail development scattered on large surface parking lots. Through this area the industrial uses and Caltrain tracks are visually compatible.

This area includes the Santa Clara Caltrain Station, Santa Clara's police station, and two- and three-story commercial developments accommodating retail, hotel, and office uses oriented around internal, landscaped surface parking lots. The area around the Caltrain station serves as the commercial center of the landscape unit. Small pockets of industrial uses exist south of Lafayette Street and south of Taylor Street.

Project Environment

The project environment consists of the Caltrain railway corridor, which has two tracks from the north boundary of the landscape unit to De La Cruz Boulevard, where the UPRR Coast Line joins the Caltrain corridor. At this location, the railway expands from two to as many as eight tracks; some of the tracks are used for freight train storage. At the south boundary of the landscape unit, Caltrain's CEMOF has multiple tracks for cleaning, repair, and storage of passenger cars and locomotives. Six roadways cross the railway, four above and two below the railway. Views of the project environment from adjacent streets are limited to the six streets that cross the railway corridor.

The electrification of the Caltrain railway, underway in 2022, would be completed prior to the start of HSR construction. The PCEP would change the visual environment along the Caltrain railway in this landscape unit, so a baseline condition is presented following the description of the existing condition. The baseline condition, after Caltrain electrification, would add OCS poles and wires within the railway corridor.

Viewer Groups

Viewer groups in the Santa Clara Landscape Unit include residential, recreational, retail viewers, commercial, industrial, institutional, and traveler viewers, including travelers on Caltrain trains. Viewer sensitivities for each of these viewer groups, shown in Table 3.15-17, range from low to high depending on the number of viewers, their proximity to the project, and the focus of their activity.

North of the Santa Clara Caltrain Station, the railway passes immediately adjacent to many residences; fencing or landscaping restricts the view from some homes and yards. Views toward the railway are available from Main Street. South of the Santa Clara Caltrain Station, residences are visually shielded from the railway by noise barriers and landscaping. However, residential viewers from the buildings' upper floors have views of the railway. In most locations, residents' exposure to the railway is blocked or obscured by fencing, walls, or landscaping, greatly reducing or eliminating their exposure; their sensitivity is moderate. In locations where residents have clear views to the railway from their homes or neighborhood, their sensitivity is high.

Recreational viewers use the few parks in the landscape unit, most of which have limited views of the railway. The Reed Street Dog Park is off Reed and Lafayette Streets, just north of the Caltrain railway. The Reed and Grant Streets Sports Park is off Reed and Grant Streets where the soccer fields are adjacent to the existing railway. Landscaping buffers views to the railway corridor, including views from Larry J. Marsalli Park, except recreationists have direct views from the soccer fields at the Reed and Grant Streets Sports Park. Recreational viewers in Newhall Park have a narrow view down Newhall Street toward the railway, limiting exposure to the railway to a

small percentage of the total view from the park. Because of the limited views from each park to the railway and recreationists' focus on their activities, recreationists have moderately low sensitivity.

Retail viewers occur in two clusters. The first, just south of the Santa Clara Caltrain Station, has no view of the railway; the second, near the Caltrain CEMOF, has a clear view to the railway. Depending on the view to the railway, retail viewers have low to moderately low sensitivity because retail buildings in the landscape unit tend to be oriented away from the railway, limiting viewers' exposure.

Commercial and industrial viewers work adjacent to the railway. In one-story buildings, views of the railway are limited by fencing and landscaping, limiting exposure and reducing sensitivity; however, newer multistory commercial buildings have clear views of the railway. These viewers have moderately low sensitivity because even with a clear view to the railway, industrial and commercial workers are focused on their work tasks, limiting views to the environment outside.

Institutional viewers consist of students and staff at Bellarmine College Preparatory. With few direct views to the railway, their sensitivity is moderately low. Travelers on roads have limited views of the railway because no roads run adjacent to it and few pass nearby or terminate at the railway.

Caltrain travelers have views to the adjacent landscape from the railway corridor. Views within the railway corridor exist where the corridor widens for multiple adjacent tracks, station facilities, or at the CEMOF. Viewer sensitivity varies depending on passenger activity on the train. Some passengers enjoy watching the passing landscape, resulting in moderate sensitivity. Other passengers engage in conversation, reading, or working while on the train, resulting in low sensitivity.

Visual Quality

As perceived by viewer groups, the natural harmony of the Santa Clara Landscape Unit is moderate, and the cultural order and project coherence are moderately high. Overall, the existing visual quality of the Santa Clara Landscape Unit is moderately high (Table 3.15-17).

With the baseline conditions, visual quality would remain moderately high. The OCS would be a minor visual addition to the existing railway corridor and supporting electrical facilities would be in an adjacent industrial neighborhood where their presence would not contrast with the existing landscape. The overall visual quality of the Santa Clara Landscape Unit would remain moderately high.

Key Viewpoints

Table 3.15-18 shows the location, viewer group, visual character, nighttime lighting levels, and visual quality of the three KVPs in the Santa Clara Landscape Unit. Photographs of the existing conditions at KVPs are provided in Section 3.15.6. Aerial mapping and existing and simulated views of each KVP may be found in the San Jose to Merced Aesthetics and Visual Quality Technical Report, Appendix B (Authority 2019b).

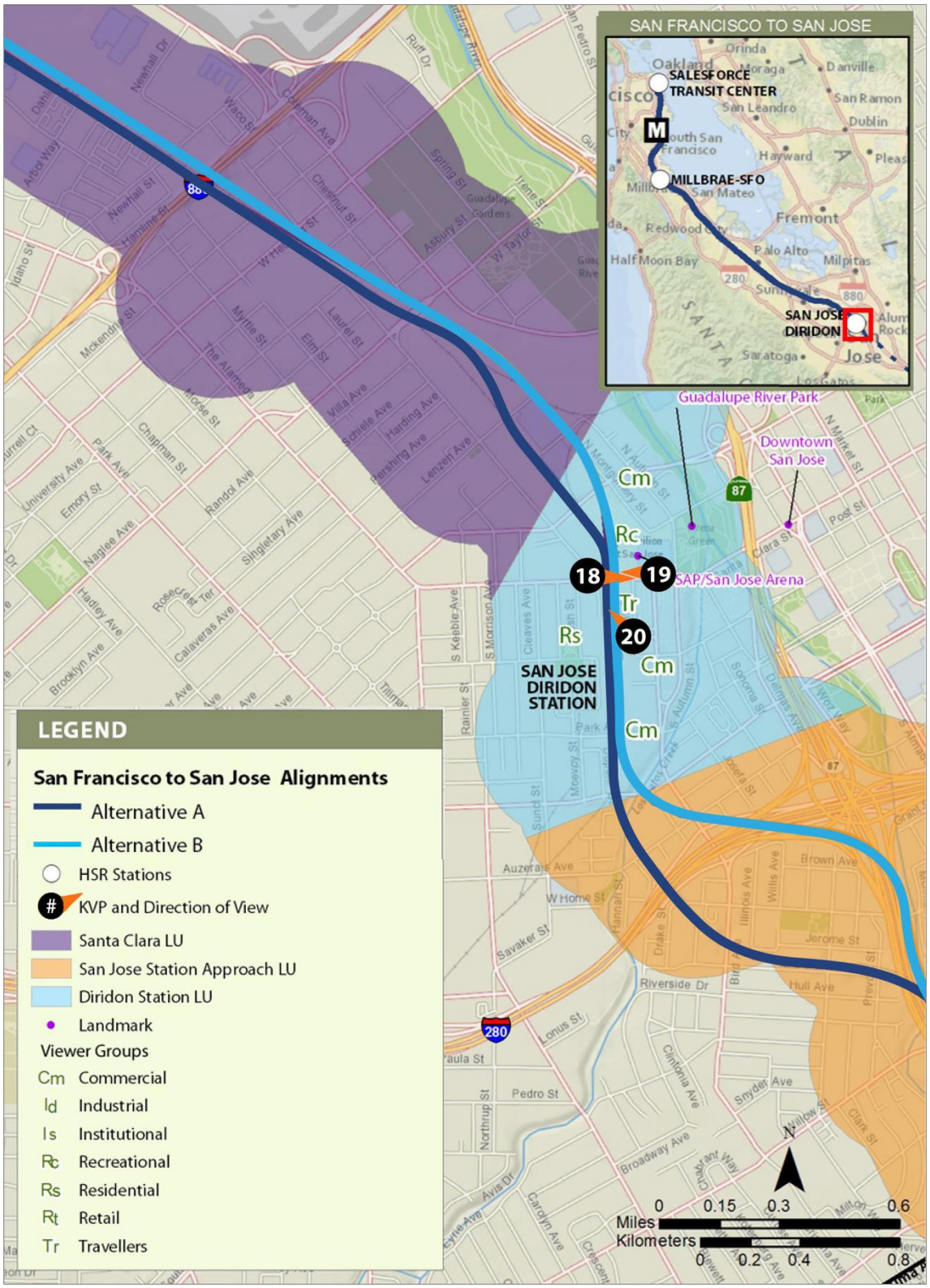
Table 3.15-18 Key Viewpoints Representing the Santa Clara Landscape Unit

KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
15	Main Street between Washington and Jackson Streets	Residential	▪ Moderate natural harmony—Residential landscape with varying species of mature trees that provide decoration and privacy ▪ Moderately high cultural order—Residences are same style and age and in good repair; industrial buildings across railway are obscured by landscaping, minimizing their contrast with the neighborhood ▪ Moderately high project coherence—Caltrain corridor is neatly maintained, lined with a wall of vegetation, and fenced with a decorative metal fence along Main Street	Moderately low	Moderately high
16	Northbound I-880 between Alameda and Coleman Avenue interchanges	Traveler	▪ Moderately high natural harmony—Includes mature trees planted to screen the freeway from surrounding neighborhoods; views of the Diablo Range from the highway elevation over the Caltrain/UPRR railway ▪ Moderate cultural order—Consists of the freeway in good repair and with neat signage and a typical, utilitarian design ▪ Project environment not visible	Moderate to moderately high	Moderately high
17	West Hedding Street at the Bellarmine College Preparatory campus	Traveler	▪ Moderately high natural harmony—Mature trees dominate the view, obscure the campus parking and classroom buildings, and frame a distant view of the Diablo Range ▪ Moderate cultural order—Includes West Hedding Street bridge, with simple railings and a gentle curve across the railway; power lines and power poles intrude visually in a disorderly way ▪ Project environment not visible	Moderate to high	Moderately high

Source: *Authority 2019b*
I- = Interstate
KVP = Key viewpoint
UPRR = Union Pacific Railroad

3.15.5.11 Diridon Station Landscape Unit

The Diridon Station Landscape Unit (Figure 3.15-18) follows the Caltrain right-of-way from West Julian Street in San Jose to West San Carlos Street in the Hannah-Gregory neighborhood. The landscape unit extent, KVP locations, visual resources, and viewer groups are illustrated on Figure 3.15-18. Table 3.15-19 shows the visual resources and character and the viewer groups in the Diridon Station Landscape Unit and the overall existing visual quality.



Source: Authority 2019b

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Figure 3.15-18 Key Viewpoints, Visual Resources, and Viewers—Diridon Station Landscape Unit

Table 3.15-19 Diridon Station Landscape Unit Visual Character, Viewer Groups, and Visual Quality

Existing and Baseline Visual Resources and Character			Viewer Groups and Sensitivity	Existing and Baseline Visual Quality
Natural Environment	Cultural Environment	Project Environment		
▪ Level terrain ▪ Urban vegetation ▪ Moderate visibility ▪ Los Gatos Creek	▪ Historic San Jose Diridon Station ▪ SAP Center ▪ VTA transit center ▪ Surface parking ▪ Multi-unit residential ▪ Older industrial ▪ Cahill Park ▪ Class II bike lanes along East San Fernando Street	▪ Multitrack Caltrain/UPRR railway ▪ VTA light rail ▪ San Jose Diridon Station ▪ Baseline conditions would add OCS for electrification of Caltrain corridor	▪ Residential viewers—high ▪ Recreational viewers—low ▪ Commercial viewers—low ▪ Travelers—moderately low to moderate	▪ Moderate

Source: Authority 2019b
OCS = overhead contact system
UPRR = Union Pacific Railway
VTA = Santa Clara Valley Transportation Authority

Visual Character

The notable visual resources and scenic vistas within and that may be seen from the Diridon Station Landscape Unit, based on analysis of aerial and satellite mapping, site surveys, and review of city and county general plans and other policy documents, are as follows:

- Diridon Station, San Jose—The historic San Jose Diridon Station (NRHP #93000274) on the western edge of downtown San Jose is the physical hub of Silicon Valley's transportation network and a central landmark for the planned redevelopment area that would include significant mixed-use development. The station sits at the end of a green square that reinforces its formal symmetry.
- Downtown skyline, San Jose—The scenic vista of the skyline of downtown San Jose visually identifies the center of the 178-square-mile city. The high-rise buildings that cluster in the downtown are visible from the nearby SR 87, I-880, and I-280 freeways. Views to the downtown provide wayfinding clues for travelers and offer a strong visual identity for the city.
- Santa Cruz Mountains—Scenic vistas of the Santa Cruz Mountains and their foothills enclose the western side of the Santa Clara and Coyote Valleys. Their forested flanks contrast with the grass- and oak-covered eastern hills and provide orientation for the valley.
- Silver Creek Hills—The Silver Creek Hills in southern San Jose separate the Santa Clara Valley from the Evergreen Valley. Scenic vistas to their largely undeveloped western slopes provide views of open space in contrast to the fully developed valley.

Natural Environment

The terrain is level and vegetation is related to existing development such as heavily landscaped surface parking lots, formal lawns fronting San Jose Diridon Station, and street trees that line the surrounding roadways. Los Gatos Creek flows near the eastern edge of the landscape unit, and may be identified as a line of trees behind small commercial buildings. Views of San Jose's downtown skyline are visible in the background to the east of the railway.

Cultural Environment

The Diridon Station Landscape Unit has a mix of development types, ranging from primarily residential areas to the west and public facilities, surface parking, and light industry to the east. The name of the primary arterial street in the landscape unit changes where it passes under the railway; to the west it is The Alameda, to the east it is West Santa Clara Street. North of West Santa Clara Street the large surface parking lot for the SAP Center at San Jose and the arena structure dominate the landscape. West of the railway are a few industrial buildings that back up to the railway. To the east past the arena parking lot is a neighborhood of mixed industrial and residential uses. The arena structure is larger than the surrounding city blocks and clad in concrete and metal, contrasting with the scale and materials of the older surrounding buildings.

Development west of the railway along The Alameda consists of new mixed-use development, ranging from two to six stories in height. Coordinated features such as lighting, signage, and building frontages contribute to the area's high visual quality. Building heights are reflective of the neighborhood's older building stock. A new colorful residential loft building, converted from the circa-1919 Del Monte Plant 51, is visible from the station, as is a two-story Whole Foods Market that includes a brewery and dining terrace overlooking The Alameda and San Jose Diridon Station.

South of West Santa Clara Street is the historic San Jose Diridon Station and its parking lots, the VTA bus transit center, and an electric utility facility. The two-story brick Italian Renaissance Revival San Jose Diridon Station was built in 1935. The station has been well maintained and features a brick exterior, several large arched windows, detailing along the roof, and an awning at the entrance. The VTA transit center north of the station is a large surface facility with small bus shelters. Immediately east of the station are large surface parking lots shaded by mature sycamore trees. Farther east of the station Montgomery Street is lined with low-profile older industrial uses, many of which have fallen into disrepair. The setbacks of these structures vary, with some built up to the street and others set back by surface parking lots and fences.

Project Environment

The project environment includes the San Jose Diridon Station and VTA light rail and Caltrain/UPRR tracks. Three tracks come into the landscape unit from the north, expanding to eight tracks in the station, and then combining to two tracks south of the station. In the station, pairs of tracks share passenger platforms—low concrete waiting areas shaded by steel canopies. These tracks and platforms are used by the passenger trains of Caltrain, Altamont Corridor Express (ACE), and Amtrak's Capitol Corridor. Freight trains passing through the station and Amtrak's Coast Starlight use the easternmost track with a single platform that is partially shaded by an awning extending from the station building.

The electrification of the Caltrain railway, underway in 2022, would be completed prior to the start of HSR construction. The PCEP would change the visual environment along the Caltrain railway in this landscape unit, so a baseline condition is presented following the description of the existing condition. The baseline condition, after Caltrain electrification, would add OCS poles and wires within the railway corridor.

Viewer Groups

The Diridon Station Landscape Unit viewer groups comprise residential, recreational, and commercial viewers and travelers (Figure 3.15-18). Viewer sensitivities for each of these viewer groups, shown in Table 3.15-19, range from low to high depending on the number of viewers, their proximity to the project, and the focus of their activity.

Residential viewers are concentrated immediately adjacent to San Jose Diridon Station on its west side. Residences consist of three- to four-story row houses and multi-unit buildings. All residential units on the east side of the development have an unobstructed view of the railway station, resulting in high exposure to the railway. Some views are also elevated, providing views across Diridon Station to the downtown San Jose skyline, resulting in high sensitivity.

Recreational viewers use Cahill Park, which has a long, narrow view down San Fernando Street toward the railway, limiting exposure to the station and its surroundings, resulting in low viewer sensitivity. Commercial viewers in one-story buildings front on streets adjacent to the railway but with limited views of it, resulting in low sensitivity.

Travelers on three roads that cross the project corridor have clear views of the railway. Approaching the railway perpendicularly in an urban setting, these travelers have moderately low sensitivity due to the short exposure and narrow views and their need to focus on busy urban driving conditions. Cyclists, including those using the Class II bike lanes along East San Fernando Street, also have moderately low sensitivity because of their focus on avoiding hazards in busy urban traffic. Bus and rail commuters transiting through San Jose Diridon Station and surrounding transit facilities have moderate sensitivity because of their regular exposure to station area views, their slower pace as pedestrians, and periods of observation while waiting for transit to arrive and depart.

Visual Quality

As perceived by the viewer groups, natural harmony is moderately low throughout the landscape unit, cultural order is moderate, and project coherence is high. Overall, the existing visual quality of the Diridon Station Landscape Unit is moderate (Table 3.15-19).

Under the baseline conditions the visual quality would remain moderate. The OCS would be a minor visual addition to the existing railway corridor and would not overwhelm the physical presence of the historic San Jose Diridon Station. The addition of the OCS would do little to increase the visual presence of the railway.

Key Viewpoints

Table 3.15-20 shows the location, viewer group, visual character, nighttime lighting levels, and visual quality of the three KVPs in the Diridon Station Landscape Unit. Photographs of the existing conditions at KVPs are in Section 3.15.6. Aerial mapping and existing and simulated views of each KVP may be found in the San Jose to Merced Aesthetics and Visual Quality Technical Report, Appendix B (Authority 2019b).

Table 3.15-20 Key Viewpoints Representing the Diridon Station Landscape Unit

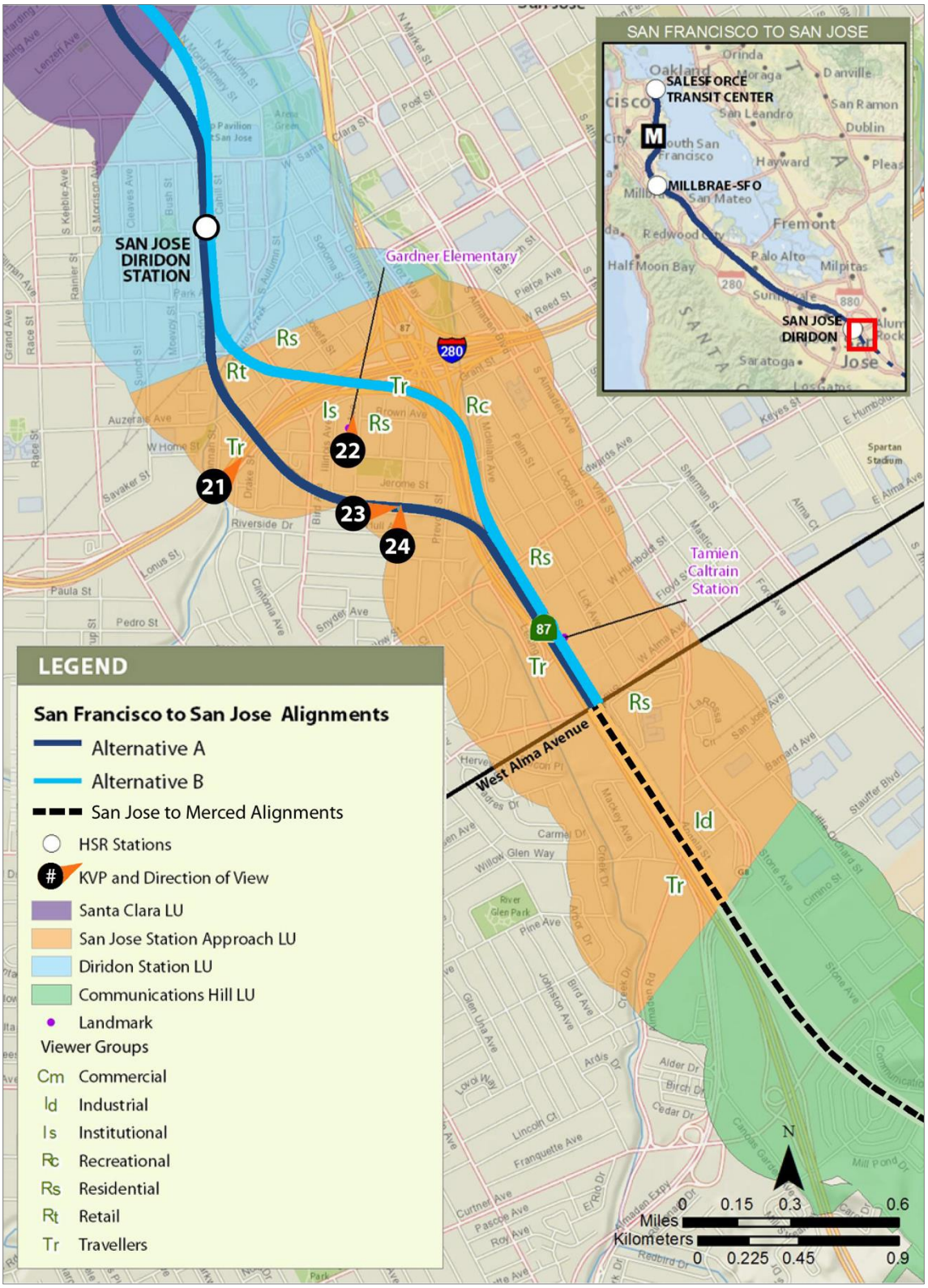
KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
18	Intersection of The Alameda and Stockton Street, immediately west of the Caltrain corridor	Residential	▪ Low natural harmony—Mature trees lack a relationship to the natural setting; land used as a staging area is covered in ruderal vegetation ▪ Moderately high cultural order—The Alameda's passing beneath the railway bridge and aesthetic details are a gateway; views of the downtown skyline are in the background ▪ Moderate project coherence—Railway and staging area detract from the surroundings	Moderately high to high	Moderate

KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
19	West Santa Clara Street, between South Autumn and South Montgomery Streets	Traveler	▪ Moderate natural harmony—Robust and mature street trees enclose and obscure surface parking lots; the Santa Cruz Mountains are visible in the distance to the west ▪ Moderate cultural order—SAP Center dominates in scale and contrasting materials; streetscape is clean and free of clutter ▪ Moderate project coherence—Railway corridor has minimal presence; however, a train crossing the bridge provides a stronger visual indication	Moderately high to high	Moderate
20	View of San Jose Diridon Station from Cahill Street, between West San Fernando and Stover Streets	Traveler	▪ Moderate natural harmony—Landscape is very formal, with a semi-circular drive the width of the station building and a small lawn with the station's flagpole; mature trees line the perimeter of the VTA bus facility just north of the station building; no views to distant landmarks ▪ Moderate cultural order—Historic character of San Jose Diridon Station in an area otherwise dominated by warehouses and commercial buildings; includes VTA bus facility ▪ High project coherence—Stately station building is prominent symbol of both passenger railway operations in the corridor and aspirations of its corporate creator and the community that restored and maintains the station	Moderately high	Moderately high

Source: Authority 2019b
KVP = key viewpoint
VTA = Santa Clara Valley Transportation Authority

3.15.5.12 San Jose Station Approach Landscape Unit

The San Jose Station Approach Landscape Unit extends southeast from West San Carlos Street in the Hannah-Gregory neighborhood following the railway and I-280/SR 87 corridors to the Almaden Expressway in the Guadalupe-Almaden Neighborhood. The landscape unit extent, KVP locations, visual resources, and viewer groups are illustrated on Figure 3.15-19. Table 3.15-21 shows the visual resources and character and the viewer groups in the San Jose Station Approach Landscape Unit and the overall existing visual quality.



Source: Authority 2019b NOVEMBER 2019

Figure 3.15-19 Key Viewpoints, Visual Resources, and Viewers—San Jose Station Approach Landscape Unit

Table 3.15-21 San Jose Station Approach Landscape Unit Visual Character, Viewer Groups, and Visual Quality

Existing and Baseline Visual Resources and Character			Viewer Groups and Sensitivity	Existing and Baseline Visual Quality
Natural Environment	**Cultural Environment**	**Project Environment**		
▪ Level terrain ▪ Urban vegetation ▪ Background views of hills and mountain ranges ▪ Moderate visibility ▪ Guadalupe River	▪ SR 87 and I-280 ▪ Single-family residences ▪ Biebrach Park, Fuller Park, Guadalupe River Park ▪ Scattered commercial ▪ Railway storage yard	▪ Two-track railway ▪ SR 87 and I-280 ▪ Tamien Caltrain Station ▪ Baseline conditions would add OCS for electrification of Caltrain corridor	▪ Residential viewers—moderate to high ▪ Recreational viewers—moderately low to moderately high ▪ Commercial viewers—moderately low ▪ Institutional viewers—low ▪ Travelers—moderately low	▪ Moderately high

Source: Authority 2019b
I- = Interstate
OCS = overhead contact system
SR = State Route

Visual Character

The notable visual resources and scenic vistas within and that may be seen from the San Jose Station Approach Landscape Unit, based on analysis of aerial and satellite mapping, site surveys, and review of city and county general plans and other policy documents, are as follows:

- Downtown skyline, San Jose—The scenic vista of the skyline of downtown San Jose visually identifies the center of the 178-square-mile city. The high-rise buildings that cluster in downtown are visible from the nearby SR 87 and I-280 freeways. Views to downtown provide wayfinding clues for travelers and offer a strong visual identity for the city.
- Guadalupe River Park—Guadalupe River Park is a 3-mile ribbon of parkland that runs along the banks of the Guadalupe River in the heart of downtown San Jose from I-880 in the north to I-280 in the south. It is a resource of regional importance to the people of Santa Clara County and the San Francisco Bay Area (Bay Area).
- Mount Hamilton, Lick Observatory, and the Diablo Range—East of the Santa Clara Valley, the high, undeveloped mountains covered in grasses, chaparral, and oak provide views of wilderness from throughout the area. Atop Mount Hamilton, the Lick Observatory, operated by the University of California, is a landmark visible from throughout the region.
- Santa Cruz Mountains—Scenic vistas of the Santa Cruz Mountains and their foothills enclose the western side of the Santa Clara and Coyote Valleys. Their forested flanks contrast with the grass- and oak-covered eastern hills and provide orientation for the valley.
- Silver Creek Hills—The Silver Creek Hills in southern San Jose separate the Santa Clara Valley from the Evergreen Valley. Scenic vistas to their largely undeveloped western slopes provide views of open space in contrast to the fully developed valley.

Natural Environment

The terrain is level and vegetation is primarily related to existing development such as residential landscaping and heavily landscaped surface parking lots. East of the SR 87 freeway is the floodplain of the Guadalupe River, which passes under both the railway and the freeway. The floodplain of the Guadalupe River is also vegetated with a natural riparian corridor that separates development from the river. Los Gatos Creek is a naturally tree-lined riparian waterway. Background views of the hills and mountain ranges are available.

Cultural Environment

The San Jose Station Approach Landscape Unit is composed primarily of residential areas that are bisected by freeways and the Caltrain/UPRR railway, with small commercial and industrial uses scattered throughout. Most residences are single-family homes, with larger multi-unit developments in a few locations, including a residential high-rise immediately south of the Tamien Caltrain Station. Bird Avenue is the primary roadway in the area, six lanes wide with no median landscaping, connecting I-280 to the San Jose Diridon Station area and the arena. South of I-280, the landscape unit is generally residential, with recreational uses following the east side of the SR 87/VTA light rail corridor. Residential uses west of the SR 87 freeway in the Gardner neighborhood are visually shielded from the freeway by existing noise barriers and fences. The Gardner neighborhood is composed of many older, well-maintained homes. The neighborhood is bisected by the Caltrain/UPRR railway and Fuller Park. A single-story, big-box Orchard Supply Hardware retail facility is the predominant use between the railway and Bird Avenue. The newer building shares the site with the older, abandoned building and differs from the old building by its contemporary façade detailing, a trussed peaked roof accenting its main entrance, and parking lot landscaping. Both buildings are separated from the street by large surface parking lots and visible through the gas stations and small retail fronting Bird Avenue. The east side of Bird Avenue is dominated by an eight-story residential building. There are many light sources in this landscape unit. Streets are brightly lit. Automobile traffic is present at all hours, especially along I-280 and SR 87 and major arterials.

The Gardner School, Gardner Community Center, Fuller Park, Guadalupe River Park, and an adjoining trail leading to downtown San Jose are the prominent public facilities in the area. A Class I bike trail joins the corridor at Willow Street, running between the freeway and railway, generally at the level of the freeway. Cyclists and pedestrians using the trail are surrounded by freeway traffic to the west and railway infrastructure to the east.

The southernmost portion of the landscape unit, between West Alma Avenue and Almaden Expressway, is bounded on the west by the elevated SR 87 freeway and on the east by a multi-unit residential complex and small, mixed industrial uses along the railway. Tall evergreens limit views to the railway corridor from the residential uses, and fences block views from the industrial uses. Residences east of the SR 87 freeway, around Tamien Station, are generally a block or more from the freeway and railway. One exception is a residential high-rise immediately adjacent to the railway on the north side of West Alma Avenue.

Project Environment

The Caltrain/UPRR railway through this landscape unit has two tracks, with a third track at the Tamien Caltrain Station and a small storage yard of four tracks for midday storage of ACE passenger trains just south of the station. The railway joins the SR 87/VTA light rail corridor just north of Willow Street and continues south to the Tamien Station, increasing the predominance of transportation infrastructure in the middle portion of the landscape unit. Caltrain's Tamien Station, the terminal for about half of the daily Caltrain service, hosts idling trains laying over between runs.

The electrification of the Caltrain railway, underway in 2022, would be completed prior to the start of HSR construction. The PCEP would change the visual environment along the Caltrain railway in this landscape unit by adding OCS poles and wires within the existing railway corridor, so a baseline condition is presented following the description of the existing condition.

Viewer Groups

The San Jose Station Approach Landscape Unit viewer groups include residential, recreational, commercial, and institutional viewers and travelers (Figure 3.15-19). Viewer sensitivities for each of these viewer groups, shown in Table 3.15-21, range from low to high depending on the number of viewers, their proximity to the project, and the focus of their activity.

Residential viewers are located in the Gardner neighborhood and south of the Tamien Caltrain Station. In this location residences are shielded from views of the adjacent freeway by landscaping or noise barriers that obscure views to the railway; therefore, their viewer sensitivity is low. Residents with views of the railway corridor vary in sensitivity. All are highly sensitive, but their varied exposure may temper their sensitivity. Residents facing Fuller Park also see the railway corridor, suggesting high exposure and high sensitivity. Some residents with homes adjacent to the railway have high exposure and sensitivity, while others have low exposure and moderate sensitivity because of landscaping or fencing limiting their views.

Recreational viewers use three parks and four Class I bike and pedestrian trails that run adjacent to the railway. Recreational viewers at Fuller Park have high exposure to the railway. Combined with the passive activities of recreationists in park settings, their sensitivity is moderately high. Views from Biebrach Park are limited to long, narrow views down street corridors, limiting exposure and resulting in moderately low sensitivity. Recreational viewers in Guadalupe Park and along the Guadalupe River Trail West are immediately adjacent to the railway. Where recreationists are directly exposed to the railway, their viewer sensitivity is moderately high.

Commercial viewers are scattered in the Tamien Station area and south of it in one-story buildings with limited views of the railway. Focusing on their work, they have moderately low viewer sensitivity. Institutional viewers—Gardner Elementary School students and staff, whose views of the railway are shielded by classroom buildings and the surrounding neighborhood—have low sensitivity.

Travelers on I-280 and SR 87 have high exposure to the project corridor where it passes over the freeway. Two VTA light rail lines run in the median of SR 87. Caltrain and other rail travelers have views to the adjacent landscape from the railway. While all these travelers have high exposure to the project corridor, overall, focused on either busy traffic conditions or occupied by other activities while riding transit, these travelers have moderately low sensitivity.

Visual Quality

As perceived by viewer groups, the natural harmony and cultural order of the San Jose Station Approach Landscape Unit are moderately high and the cultural order and project coherence are high. Overall, the existing visual quality of the San Jose Station Approach Landscape Unit is moderately high (Table 3.15-21).

The baseline conditions with the PCEP would include OCS to power EMU trains. The OCS would be carried on individual poles, increasing the presence of the railway corridor, but it would not obscure views across the corridor. The electrification would extend south to Tamien Station. South of the station, the railway would remain unelectrified. The visual quality would remain moderately high.

Key Viewpoints

Table 3.15-22 shows the location, viewer group, visual character, nighttime lighting levels, and visual quality of the four KVPs in the San Jose Station Approach Landscape Unit. Photographs of the existing conditions at KVPs are in Section 3.15.6. Aerial mapping and existing and simulated views of each KVP may be found in the San Jose to Merced Aesthetics and Visual Quality Technical Report, Appendix B (Authority 2019b).

Table 3.15-22 Key Viewpoints Representing the San Jose Station Approach Landscape Unit

KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
21	Southbound I-280, west of Bird Avenue, about 1,000 feet south of the rail corridor	Traveler	▪ Moderate natural harmony—Characterized by the many mature trees that line the freeway and views of the Diablo Range in the distance ▪ High cultural order—I-280 infrastructure is neat but utilitarian; view of San Jose's skyline displays the greatest concentration of high-rise buildings in the Silicon Valley, with a backdrop of the Diablo Range ▪ Moderately high project coherence—The railway bridge over I-280 blends with the utilitarian views of the freeway and does not interfere with views of the skyline	Moderate to moderately high	Moderately high
22	West Virginia Street toward the Gardner School	Residential and institutional	▪ Moderately low natural harmony—Street trees and artificial turf playing fields on the school campus ▪ Moderately high cultural order—Campus design appears thoughtful with views of the downtown high-rises in the background ▪ Project environment not visible	Moderately low	Moderate
23	Fuller Avenue east to Fuller Park and rail corridor	Residential and recreational	▪ Moderate natural harmony—Thriving, mature trees, but obviously urban environment ▪ Moderate cultural order—Park defined by low fence, adjacent church lacks architectural treatment to identify it as a place of worship ▪ Moderately low project coherence—No strong indication of the railway's presence	Moderately Low	Moderate

KVP	Location	Viewer Group	Natural, Cultural, and Project Environment	Nighttime Lighting Levels	Existing and Baseline Visual Quality
24	Delmas Avenue north to rail corridor	Residential	▪ Moderately low natural harmony—Mature trees but all ground is covered in pavement ▪ Moderately low cultural order—Trailer parked on sidewalk, dominant utility poles, mix of architectural forms ▪ Moderately low project coherence—No indication overpass carries a railroad or highway	Moderate	Moderately Low

Source: *Authority 2019b*
I- = Interstate

3.15.6 Environmental Consequences

3.15.6.1 Overview

This section discusses the potential impacts on aesthetics and visual quality that could result from implementing the project alternatives. It is organized by the following topics: impacts on visual quality including scenic vistas, scenic highways, and light and glare. Each topic area addresses potential impacts from the No Project Alternative and the project alternatives. Impacts of the project alternatives are presented in terms of the temporary and permanent changes to visual character, viewer sensitivity, and visual quality. For aesthetics and visual quality, the DDV would not result in a different level of impact for Alternative A compared to Alternative A without the DDV. The DDV would have unique factors that are considered in the aesthetics and visual quality impact analysis and are described herein.

Project construction and operations would primarily take place in the existing Caltrain right-of-way and the minor adjustments to track, new fencing, and four-quadrant gates at the at-grade crossings would not change the visual character of the railway. The most substantial permanent new visual elements adjacent to or within viewing range of the railway would be associated with expansion of the existing Millbrae Station, construction of the East or West Brisbane LMF, trackway expansion between San Mateo and Redwood City to provide passing tracks (Alternative B), new communication towers, and the elevated structures making up the north and south approaches to San Jose Diridon Station (Alternative B) where bulk and mass cannot be reduced.

The sources of increased nighttime lighting at the HSR stations would be the lengthened platforms at the 4th and King Street Station, the new HSR platforms at the Millbrae Station, and either lengthened platforms at San Jose Diridon Station (Alternative A) or an elevated station at San Jose Diridon Station (Alternative B). New sources of nighttime lighting would be generated at the undeveloped Brisbane LMF sites, increasing lighting in the immediate area that would also be visible from residences on San Bruno Mountain. HSR trains operating at night and nighttime maintenance activities along the alignment would contribute a regular and repeating source of light similar to existing Caltrain and freight trains.

The Authority will provide opportunities for community input to shape design enhancements to minimize impacts on visual quality (AVQ-IAMF#1, AVQ-IAMF#2). During construction, the Authority and its contractors will screen construction equipment, restrict fugitive dust emissions, and create site restoration and revegetation plans (SOCIO-IAMF#1). The project would comply with the Authority's aesthetic guidelines and the design of project infrastructure would balance the desire for a consistent, project-wide aesthetic with the relevant local context. Through the Authority's aesthetics review process, the Authority would consult with local jurisdictions to

involve the community, solicit input on local aesthetic preferences, and incorporate this feedback into final design.

The Aesthetics and Visual Quality Technical Reports for this Project Section and the San Jose to Merced Project Section (Authority 2019a, 2019b) explain the overall change in the visual quality rating of each project alternative for each landscape unit and KVP. The intensity of the change to aesthetics and visual quality would vary with context, such as where the project would be visible to viewers, and the affected viewer sensitivity to the visual change. Table 3.15-23 shows the permanent change in the visual quality rating compared to the existing condition by landscape unit and KVP for both project alternatives.

Table 3.15-23 Summary of Visual Quality Change for Project Alternatives

Landscape Unit/KVP	Existing Visual Quality Rating	Viewer Sensitivity	Project Visual Quality Rating
Mission Bay Landscape Unit	MH	Alternative A, B: M	Alternative A, B: MH
KVP 1 4th and King Street Station	ML	Alternative A, B: M	Alternative A, B: ML
KVP 2 4th and King Street Station Platform 4	M	Alternative A, B: M	Alternative A, B: M
Southeast San Francisco Landscape Unit	M	Alternative A, B: ML	Alternative A, B: M
Brisbane Landscape Unit	M	Alternative A, B: M	Alternative A, B: M
KVP 3 Blanken Avenue	ML	Alternative A, B: ML	Alternative A, B: ML
KVP 4 Kings Road	MH	Alternative A, B: M	Alternative A, B: M
South San Francisco Landscape Unit	M	Alternative A, B: ML	Alternative A, B: M
San Bruno–Millbrae Landscape Unit	M	Alternative A, B: MH	Alternative A, B: M
KVP 5 El Camino Real Millbrae	M	Alternative A, B: M	Alternative A, B: ML
KVP 6 Millbrae Station	ML	Alternative A, B: MH	Alternative A, B: L
Burlingame Landscape Unit	MH	Alternative A, B: M	Alternative A, B: MH
San Mateo–Redwood City Landscape Unit	M	Alternative A, B: M	Alternative A, B: M
KVP 7 South B Street	MH	Alternative A, B: H	Alternative A: MH Alternative B: ML
KVP 8 39th Avenue	ML	Alternative A, B: M	Alternative A, B: ML
KVP 9 San Carlos Station	MH	Alternative A, B: MH	Alternative A: MH Alternative B: M
KVP 10 Redwood City Station	M	Alternative A, B: M	Alternative A, B: M
Atherton–Mountain View Landscape Unit	MH	Alternative A, B: MH	Alternative A, B: MH
KVP 11 Menlo Park Station	MH	Alternative A, B: M	Alternative A, B: MH
KVP 12 El Palo Alto	MH	Alternative A, B: MH	Alternative A, B: MH
KVP 13 Peers Park	H	Alternative A, B: M	Alternative A, B: H
Sunnyvale Landscape Unit	M	Alternative A, B: M	Alternative A, B: M
KVP 14 Sunnyvale Avenue	M	Alternative A, B: ML	Alternative A, B: M

Landscape Unit/KVP	Existing Visual Quality Rating	Viewer Sensitivity	Project Visual Quality Rating
Santa Clara Landscape Unit	MH	Alternative A, B: ML	Alternative A, B (I-880[1]): MH Alternative B (Scott[2]): M
KVP 15 Main Street	MH	Alternative A, B: H	Alternative A, B (I-880[1]): MH Alternative B (Scott[2]): M
KVP 16 I-880	MH	Alternative A, B: L	Alternative A, B:MH
KVP 17 West Hedding Street	MH	Alternative A, B: M	Alternative A, B: MH
Diridon Station Landscape Unit	M	Alternative A, B: M	Alternative A: M Alternative B: ML
KVP 18 Caltrain from The Alameda	M	Alternative A, B: H	Alternative A: M Alternative B: ML
KVP 19 Caltrain from West Santa Clara Street	M	Alternative A, B: M	Alternative A: M Alternative B: MH
KVP 20 Diridon Station	MH	Alternative A, B: M	Alternative A, B: MH
San Jose Station Approach Landscape Unit	MH	Alternative A, B: MH	Alternative A: MH Alternative B: M
KVP 21 San Jose Skyline	MH	Alternative A, B: M	Alternative A, B: MH
KVP 22 Gardner School	M	Alternative A: N/A Alternative B: MH	Alternative A: N/A Alternative B: ML
KVP 23 Fuller Avenue	M	Alternative A: MH Alternative B: N/A	Alternative A: M Alternative B: N/A
KVP 24 Delmas Avenue	ML	Alternative A: H Alternative B: N/A	Alternative A: ML Alternative B: N/A

Sources: Authority 2019a, 2019b
I- = Interstate
KVP = key viewpoint, L = Low, ML = Moderately Low, M = Moderate, MH = Moderately High, H = High, N/A = not applicable
[1] Viaduct to I-880 is abbreviated "I-880."
[2] Viaduct to Scott Boulevard is abbreviated "Scott."

3.15.6.2 Impacts on Visual Quality, including Scenic Vistas

No Project Impacts

The population of the Bay Area is expected to grow through 2040 (Section 2.6.1.1, Projections Used in Planning). Development in the Bay Area would continue under the No Project Alternative and result in associated direct and indirect impacts on aesthetics and visual quality. The No Project Alternative considers the impacts of conditions forecast by current land use and transportation plans near the project, including planned improvements to the highway, aviation, conventional passenger rail, freight rail, and port systems through the 2040 planning horizon. Without the HSR project, the forecast population growth would increase pressure to expand highway and airport capacities. The Authority estimates that additional highway and airport projects (up to 4,300 highway lane miles, 115 airport gates, and four airport runways) would be needed to achieve equivalent capacity and relieve the increased pressure (Authority 2012). Components of these projects, especially new airport runways and highway expansion outside

the existing transportation rights-of-way, would have the potential to alter the scale and character of the environments where they occur. Planned and other reasonably foreseeable projects anticipated to be built by 2040 include residential, commercial, office, industrial, recreational, and transportation projects that would introduce new visual elements to the landscape and would result in changes to the natural, cultural, and project environments that are unrelated to the project. A list of anticipated future development projects is provided in Volume 2, Appendix 3.18-A, Cumulative Nontransportation Plans and Projects List, and Appendix 3.18-B, Cumulative Transportation Plans and Projects Lists.

Impacts on visual quality from planned and other reasonably foreseeable projects would depend on the setting and context of the project and the design aesthetic. Within the largely urban environment along the Project Section, new development would be expected to intensify the existing urban character, in particular through planned TOD development around existing Caltrain stations. Proposed developments would be subject to design and environmental review prior to approval. Existing local plans and policies provide policies and guidelines so that new development is of high visual quality. Public projects, including transportation projects, would also incorporate design guidelines to reduce impacts on aesthetics and visual quality.

Planned development and transportation projects that would occur under the No Project Alternative would likely include various forms of mitigation to address impacts on aesthetics and visual quality. Development of private and public projects is expected to continue under the No Project Alternative because of population growth. While the No Project Alternative would substantially change visual resources as a result of new development, it is anticipated that development would proceed consistent with plans and standards such that visual quality would not be substantially adversely affected.

Project Impacts

Construction Impacts

Construction of the project alternatives would modify the existing 4th and King Street Station, expand the Millbrae Station, realign track, build an LMF, modify the Bayshore Caltrain Station, modify Caltrain station platforms, implement four-quadrant gates at at-grade crossings, and install communication radio towers approximately 100 feet tall. Alternative A would also modify existing platforms and track at the San Jose Diridon Station, build new ticketing and waiting areas for HSR passengers, and add a third track from Diridon Station south to West Alma Avenue. Alternative B would add passing tracks between San Mateo and Redwood City, relocate the San Carlos Caltrain Station, and build aerial viaducts to access an aerial HSR station above the existing San Jose Diridon Station. Construction activities would include site preparation and earthwork; establishing equipment and materials storage areas; building roadway and pedestrian detours and closures; utility relocation; transport and storage of materials and equipment; implementing trackway modifications, platform modifications, communications facilities, modifications to the OCS, and related infrastructure; building noise barriers; restoring detoured streets and pathways to their pre-construction condition; and restoring landscaping and staging sites.

The duration and intensity of construction activities would vary by location and project component. Minor track shifts within the existing Caltrain corridor would be performed by on-track equipment that would operate along the existing Caltrain tracks as it adjusts track alignment and ballast and would be expected to last no more than several days at any given location. The installation of four-quadrant gates would occur over a period of 2 to 4 weeks. Meanwhile, the construction of several major project components would occur over several years—expansion of the existing Millbrae Station would last 2 years, construction of the Brisbane LMF would last 2 to 3 years, and construction of the passing track under Alternative B would last 4.5 years. Aerial structures through the Santa Clara, Diridon, and San Jose Station Approach Landscape Units and elevated HSR station facilities at Diridon Station under Alternative B (both viaduct options) would entail scaffolding and construction equipment that would be tall and therefore visible from locations beyond the immediate project vicinity. The intensity of the impacts on aesthetics and visual quality would vary with context, such as where the construction activity would be visible to

viewers with greater sensitivity to the visual change. The construction activities and duration for Alternative A with the DDV would be approximately the same, and would occur in the same locations, as Alternative A without the DDV. Thus, construction-period impacts on aesthetics and visual quality would be the same. Construction activities are described in Chapter 2, Alternatives.

Impact AVQ#1: Temporary Direct Impacts on Visual Quality and Scenic Vistas

Major construction activities for either of the project alternatives would increase the cultural disorder in views from ground disturbance and demolition, along with introducing construction equipment and associated materials into existing views. During construction of the major project components, heavy equipment and associated vehicles such as cranes, dozers, graders, scrapers, and trucks, would be visible in the RSA. Where construction activities take place, dust, material stockpiles, and other visual signs of construction would also be present and visible to nearby viewers. Depending on location, viewers could see staging areas, worker parking, and equipment and materials storage areas, which would add industrial-looking elements into the landscape. Introducing construction activities and equipment into the viewshed would be limited to days or weeks for the minor project components, such as realigning track and installing four-quadrant gates. All viewer groups along the highly urbanized project alignment are likely to be accustomed to seeing machinery, trucks, and vehicles in the RSA because of roadway improvement projects, development projects, and existing Caltrain rail maintenance activities.

Table 3.15-24 shows temporary construction activities with the potential to affect visual quality and scenic vistas by landscape unit. Additional information is available in the Aesthetics and Visual Quality Technical Reports (Authority 2019a, 2019b). As shown in Table 3.15-24, temporary construction activities would be similar across Alternatives A and B, except in the San Mateo–Redwood City, Diridon Station, and San Jose Station Approach Landscape Unit, where the construction activity associated with Alternative B (both viaduct options) would be much greater than that under Alternative A, and the Santa Clara Landscape Unit, where the construction activity associated with Alternative B (Viaduct to Scott Boulevard) would be greater than either Alternative A or Alternative B (Viaduct to I-880).

Table 3.15-24 Landscape Unit-Specific Temporary Construction Activities

Landscape Unit	Description of Location-Specific Construction Activities
Mission Bay	Primary construction staging for both project alternatives would be located at the 4th and King Street Station terminal facilities in the existing Caltrain right-of-way.
Southeast San Francisco	Both project alternatives would require only minor shifts to trackwork. Construction vehicles and materials would be staged outside the landscape unit, due to the anticipated location of the work and the minimal construction activities anticipated.
Brisbane	Under Alternative A, primary construction staging would be east of the existing Caltrain railway and Tunnel Road on the site of the East Brisbane LMF. Alterations to the Bayshore Caltrain Station would require passengers to navigate temporary passageways across the construction site. Site preparation would entail construction equipment activity, followed by utility construction, building construction, and trackwork. Alternative B would have similar construction activity to Alternative A, but because of the West Brisbane LMF location, staging would take place west of the existing railway and there would be additional grading activity to remove portions of Icehouse Hill on the site of the LMF.
South San Francisco	Both project alternatives would require only minor trackwork. Construction vehicles and materials would be staged outside the landscape unit because of the anticipated location of the work and the minimal construction activities anticipated.

Landscape Unit	Description of Location-Specific Construction Activities
San Bruno–Millbrae	Primary construction staging for both project alternatives would occur west of the Millbrae Station between El Camino Real and the Caltrain railway, north of Millbrae Avenue. Temporary scaffolding would be erected above the active railway platforms where construction would occur. Access west of the existing station would require passengers to navigate temporary passageways across the construction site. Streetscape improvements would take place along California Drive, with temporary detours for vehicles, cyclists, and pedestrians.
Burlingame	Both project alternatives would require only minor trackwork. Construction vehicles and materials would be staged outside the landscape unit because of the anticipated location of the work and the minimal construction activities anticipated.
San Mateo–Redwood City	Under Alternative A, only minor trackwork would be required. Construction vehicles and materials would be staged outside the landscape unit. Under Alternative B, the existing Caltrain railway between 9th Avenue in San Mateo and Whipple Avenue in Redwood City would be expanded from two to four tracks. New fill, retaining walls, widened or rebuilt rail bridges over existing grade-separated streets, pedestrian crossings, and stations would be built. Staging would take place on existing Caltrain property. Site preparation would entail construction equipment activity, followed by utility construction, building construction, and trackwork.
Atherton–Mountain View	Both project alternatives would require only minor shifts to track. Construction vehicles and materials would be staged outside the landscape unit because of the anticipated location of the work and the minimal construction activities anticipated.
Sunnyvale	Both project alternatives would require only minor shifts to track. Construction vehicles and materials would be staged outside the landscape unit because of the minimal construction activities anticipated.
Santa Clara	The primary staging for Alternative B (both viaduct options) would be north of West Julian Street, between the Caltrain/UPRR tracks and Montgomery Street. Land use around each site is primarily industrial. Under Alternative A, there would be horizontal shifts to the existing railway to permit blended HSR/Caltrain operations. At West Taylor Street, a single-track bridge for UPRR would be added east of the existing railway grade separation. Adjacent viewers in this area are primarily industrial viewers, with low to moderately low sensitivity. All other construction activities for Alternative A in the landscape unit would be similar to existing railway maintenance activities. Under Alternative B (Viaduct to I-880), construction of an aerial HSR structure would take place adjacent to the existing railway, adjacent to retail and industrial uses, descending to grade at I-880. The aerial structure would be approximately 1 mile long. North of I-880, Alternative B (Viaduct to I-880) would use existing tracks, with no construction activities necessary. Under Alternative B (Viaduct to Scott Boulevard), the aerial structure would extend to Scott Boulevard. Construction of the aerial structure would be visible to travelers on I-880 and from residential areas adjacent to the railway. The aerial structure would be approximately 3.5 miles long. Construction activities for Alternative B (Viaduct to Scott Boulevard) would be visible to highly sensitive residential viewers.

Landscape Unit	Description of Location-Specific Construction Activities
Diridon Station	Under Alternative A, there would be horizontal shifts to the existing tracks to permit blended HSR/Caltrain operations. At Diridon Station, two existing station platforms would be raised approximately 4 feet and lengthened to approximately 1,400 feet to accommodate HSR trains. This construction would be visible to adjacent highly sensitive residential viewers but would be partially obscured by other station platform canopies and stationary trains. Other construction activities for Alternative A in the landscape unit would be similar to existing railway maintenance activities. Alternative A with the DDVwould have the same vertical profile as Alternative A without the DDV. The DDV would require additional at-grade encroachment into the SAP Center parking lot compared to Alternative A without the DDV, but it would not change the existing visual quality of the parking lot. In addition, the DDV would encroach on one additional commercial property and displace and remove one additional commercial structure compared to Alternative A without the DDV. The only public view of the removed commercial structure is from Julian Street, where it descends to pass under the railway tracks. The existing structure and retaining walls of the Julian Street underpass would be unaltered. The tall, solid fencing that limits views to the commercial building would remain. The additional building removal under Alternative A with the DDV would not materially degrade the visual character or views from surrounding areas compared to the aesthetic and visual quality effects of Alternative A without the DDV. Under Alternative B (both viaduct options), primary construction staging would be south of Otterson Street, between the Caltrain/UPRR tracks and Montgomery Street. Construction of facilities over the existing platforms at the San Jose Diridon Station would take place in two stages, with half the station platforms closed for each stage. Temporary scaffolding to build the elevated facilities would be erected, obscuring views across the tracks. Construction activities for the HSR station building and access roads would require removal of many mature trees in the VTA transit center and parking lots. Construction barriers would line sidewalks and roadways, blocking views to transit facilities.
San Jose Station Approach	Under Alternative A, construction activities would be in or adjacent to the existing railway. Construction activities at some locations would be in view of highly sensitive residential and recreational viewers, temporarily providing views that contrast with existing residential and park settings. Under Alternative B (both viaduct options), primary construction staging would be located in the adjacent Diridon Station Landscape Unit. Temporary shoring for the aerial structure spanning I-280 and SR 87 would block some views at grade for travelers along the freeways and intersecting streets and for recreational viewers along the Guadalupe River Trail.

Sources: Authority 2019a, 2019b
DDV = Diridon Design Variant
HSR = high-speed rail
I- = Interstate
LMF = light maintenance facility
SR = State Route
UPRR = Union Pacific Railroad
VTA = Santa Clara Valley Transportation Authority

Construction activities within the railway under Alternatives A and B would include shifting the track alignment, installing four-quadrant gates and communication radio towers, and shifting the OCS poles. These activities would be similar to other common rail maintenance and roadway projects in the Project Section and hence would be familiar to viewers. These construction activities would be of short duration with minimal construction-related impacts on visual quality.

Construction of either LMF in the Brisbane Landscape Unit would take place over a period of 2 to 3 years, extending from north of the existing Bayshore Caltrain Station to the Brisbane Lagoon. Heavy equipment would be used to create earthworks, approach tracks, and new roadways, including a new overcrossing for Tunnel Avenue. The few viewers in the immediate area of the

LMF are industrial workers at the Recology facility and nearby lumberyard who tend to have low to moderately low viewer sensitivity. Caltrain travelers, with moderately low viewer sensitivity, would experience construction in the immediate vicinity of the Bayshore Caltrain Station, including partial reconstruction of the station and new approach tracks and a rail flyover south of the station. The existing visual quality in the vicinity of the station is moderately low, similar to that described for KVP 3, which is approximately 700 feet north of the station. Construction of the temporary rail flyover south of the station would reduce views from the station during construction, reducing the visual quality to low.

Station construction activity in both San Francisco and Millbrae would be the same under Alternatives A and B. The alterations to the existing 4th and King Street Station in San Francisco would be minimal and would occur within the existing Caltrain right-of-way, resulting in minimal temporary construction-related impacts on visual quality. At Millbrae, two tracks, an expanded station concourse, a new HSR station facility west of the alignment, and expanded parking would require building demolition, grading, construction above existing passenger facilities, and railway facility expansion occurring over a period of 2 years. Removal of buildings lining the east side of El Camino Real would open views to the Millbrae Station and provide views to the construction activities on the site, reducing the visual quality from moderate to moderately low. The Authority and its contractors will develop a construction management plan (CMP) that includes visual protection measures designed to minimize impacts on residents and businesses (SOCIO-IAMF#1). This feature will be effective in partially screening the construction activities from sight, but some elements of the station modifications—like the extended mezzanine and west entry building—would be tall enough to be seen over screening fences. The station construction activity would decrease the visual quality by one level for traveling viewers on El Camino Real with moderately low sensitivity.

In the San Mateo–Redwood City Landscape Unit, between Ninth Avenue in San Mateo and Whipple Road in Redwood City, Alternative A would require minor shifts to the existing track alignment, minimally affecting visual quality. Under Alternative B, expanding the two-track railway to a four-track railway would entail building retaining walls, widening the existing embankment, installing new tracks and OCS, reconstructing the Hayward Park and Belmont Caltrain Stations, expanding the Hillsdale Caltrain Station, and relocating the San Carlos Caltrain Station platforms. These activities would take place over a period of 4.5 years and be visible from existing residences and businesses adjacent to the alignment. Construction activities to expand the railway from two to four tracks would decrease visual quality by bringing construction activities into locations where they would contrast with the existing visual character and by opening views to the railway that were previously shielded from sensitive viewers. The Authority and its contractors will develop a CMP that includes visual protection measures designed to minimize impacts on residents and businesses (SOCIO-IAMF#1). This project feature will be effective in partially screening the construction activities from sight, but truck traffic and other heavy construction activities would still be visible to viewers with moderate to high sensitivity, especially in residential areas along Old County Road in San Mateo, Belmont, and San Carlos.

Through the Santa Clara, Diridon, and San Jose Station Approach Landscape Units, where portions of the alignment for Alternative B would be on viaduct, the project would use precast span construction: elevated guideway sections would be manufactured at a central facility and conveyed to the construction site on transporters that would move along the completed portions of the viaduct. This method would reduce the limits of construction, area of disturbance, and amount of equipment needed to build the viaduct. The contractor would use conventional construction methods to build the at-grade and embankment portions of the alignment. Where construction activities—such as precast yards, large earthworks, and large structures—occur, the cultural order would decline relative to the existing land use in the area because of the industrial character of precast yards, heavy equipment movement required to construct earthworks, or extensive view-blocking scaffolding required where bridge spans are too great or remote to justify precast construction. Visual impacts during construction would be greater in areas with highly sensitive viewer groups, such as residents and recreationists, where there are more viewers, and where larger portions of the activities would be visible. Construction may be visible from some

locations with views to surrounding mountains and peaks. Blocked views from roadways and bridges would be fleeting for travelers such as motorists, bicyclists, and pedestrians, resulting in low viewer sensitivity and no impact on the visual environment and visual quality. The views for institutional and commercial viewers with moderate viewer sensitivity from adjacent multilevel buildings would be blocked where viaducts and overcrossings are under construction, potentially resulting in an impact, depending on the view. These declines would affect visual quality for the duration of the construction period. Depending on location and viewer groups present, the decline in visual quality could be two levels, triggering an impact on the visual environment and visual quality where sensitive viewers are present.

During construction, the Authority and its contractors will screen and site activities away from sensitive viewers, restore temporary construction sites to their pre-construction condition, and develop a fugitive dust control plan to minimize fugitive dust emissions and associated visual impacts (AQ-IAMF#1). In addition, the Authority and its contractors will develop a CMP that includes visual protection measures designed to minimize impacts on residents and businesses (SOCIO-IAMF#1).

CEQA Conclusion

The impact under CEQA would be less than significant under Alternative A because modifications to the 4th and King Street Station, expansion of the Millbrae and San Jose Diridon Stations, and construction of the Brisbane LMF would not substantially degrade the existing visual character or quality of the sites and their surroundings. Modifications to the 4th and King Street Station and expansion of the San Jose Diridon Station would not decrease the visual quality. Construction of the Brisbane LMF would decrease the visual quality by one level for viewers with moderately low viewer sensitivity. Construction of the Millbrae Station would decrease the visual quality by one level for traveling viewers on El Camino Real with moderately low sensitivity. Therefore, CEQA does not require mitigation.

The impact under CEQA would be less than significant for Alternative B because activities associated with modifications to the 4th and King Street Station and Millbrae Station and construction of the Brisbane LMF would not substantially degrade the existing visual character or quality of the sites and their surroundings. Construction of the Brisbane LMF would decrease the visual quality by one level for viewers with moderately low viewer sensitivity. Construction of the Millbrae Station would decrease the visual quality by one level for traveling viewers on El Camino Real with moderately low sensitivity. Therefore, CEQA does not require mitigation.

Construction of passing tracks in the San Mateo–Redwood City Landscape Unit and the aerial viaduct and station in the Santa Clara, Diridon Station, and San Jose Station Approach Landscape Units under Alternative B would have a significant impact on visual quality under CEQA. Construction could reduce the visual quality rating of a landscape unit by one or two levels depending on the setting, affecting viewers with high to moderate sensitivity. Even with the visual protection measures designed to minimize impacts on residents and businesses (SOCIO-IAMF#1), truck traffic, viaduct, and elevated HSR station facilities in the Santa Clara, Diridon Station, and San Jose Station Approach Landscape Units and other heavy construction activities would be visible to viewers with moderate to high sensitivity, especially in residential areas along Old County Road in San Mateo, Belmont, San Carlos, and north and south of the San Jose Diridon Station. Mitigation measures to address this impact are identified in Section 3.15.10, CEQA Significance Conclusions. Section 3.15.7 describes the measures in detail.

Impact AVQ#2: Permanent Direct Impacts on Visual Quality—Mission Bay Landscape Unit

The existing visual quality in the Mission Bay Landscape Unit is moderately high. Travelers and residential viewer groups, with moderate sensitivity, make up the majority of the viewers in this landscape unit. Baseline and simulated views of Alternatives A and B at two KVP locations illustrate views from travelers.

In the Mission Bay Landscape Unit, both project alternatives would be the same. The project would use the existing 4th and King Street Station and at-grade tracks to accommodate HSR service. Adjacent development consists of midrise commercial, residential, and institutional

buildings and the elevated I-280 freeway and ramps. Travelers and residential viewers are the primary viewers in this landscape unit and typically have moderate sensitivity. Where not constrained by the elevated freeway and ramps, background views across the rail facilities provide panoramas of the San Francisco skyline from the downtown towers west to Twin Peaks.

Outside the 4th and King Street Station area and throughout most of the landscape unit, changes would not alter the 2029 baseline visual conditions, because project actions such as improving at-grade crossings with four-quadrant gates and median barriers, shifting track and OCS locations, and installing a co-located radio tower would all be perceived by viewers as minor changes to the existing and long-established railway corridor. Where the railway passes China Basin Water Channel, near the Mission Bay Drive grade crossing, tracks and OCS would be identical to baseline conditions, although additional gates and warning lights would be added to the grade crossing. Viewer groups in the Mission Bay Landscape Unit, including travelers with moderate sensitivity, would not perceive a change in the visual quality. Overall, the existing visual quality for the Mission Bay Landscape Unit would remain moderately high.

The primary changes to visual resources would occur around the 4th and King Street Station, where improved facilities for HSR passengers and trains would result in minor alterations to the existing station. The exterior appearance of the station building would be unchanged, except for new signage, as illustrated on Figure 3.15-20. Visual quality at KVP 1 would remain moderately low for travelers along Fourth Street.

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Figure 3.15-20 KVP 1—Baseline and Simulation with HSR: Alternatives A and B, Fourth Street to 4th and King Street Station

Within the 4th and King Street Station, changes would be limited to raising and extending two existing station platforms to provide level boarding for HSR trains, adding ticketing facilities and fare gates, and installing new signage to direct passengers to the HSR trains. Figure 3.15-21 illustrates the platform changes from the perspective of a passenger. The raised platforms for

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Figure 3.15-21 KVP 2—Baseline and Simulation with HSR: Alternatives A and B, 4th and King Street Station Platform Four

HSR boarding would do little to change the view to the surrounding environment from the 2029 baseline conditions, with views to the skyline and Twin Peaks blocked by the OCS. The fare gates, ramp to the raised platform, and presence of HSR trains would be the only alterations in the station, resulting in very few differences from the existing Caltrain platform facilities. The gates would add a formal entry portal to the view, but the view would remain clearly a railway station platform and would be similar to the other platforms at the 4th and King Street Station. With the view down the platform similar to the 2029 baseline conditions, visual quality at KVP 2 would remain moderate for passengers.

CEQA Conclusion

The impact would be less than significant under CEQA for Alternatives A and B in the Mission Bay Landscape Unit because track shifts and other modifications in and adjacent to existing railway facilities would conform to the existing character of the area and would not change the existing visual quality. Travelers and residential viewers with moderate viewer sensitivity would not experience any change in existing visual character or quality of the site and its surroundings. Therefore, CEQA does not require mitigation.

Impact AVQ#3: Permanent Direct Impacts on Visual Quality—Southeast San Francisco Landscape Unit

The existing visual quality in the Southeast San Francisco Landscape Unit is moderate. Industrial viewers with moderately low viewer sensitivity are the primary viewer group. There are no KVPs in this landscape unit.

Both project alternatives would be the same in the Southeast San Francisco Landscape Unit. The HSR system would use the existing Caltrain tracks, which extend at grade, through tunnels, and on retained fill, to accommodate HSR service. The railway is often out of view, either running under the I-280 freeway or passing through one of four existing tunnels. Industrial viewers are the primary viewers in this landscape unit and typically have moderately low sensitivity. Their views to the skyline and Bay are often blocked by the elevated I-280 freeway and adjacent industrial structures.

Slight horizontal changes to the track and OCS configuration from the 2029 baseline conditions and installation of four-quadrant gates and median barriers at at-grade crossings under both project alternatives would not alter the existing character of the railway corridor, nor would installation of standalone radio tower #1 on the west side of the existing railway near either Jerrold Avenue (alternate site 1) or near Quint Street (alternate site 2). Where the railway passes Islais Creek, as it passes under I-280, tracks and OCS would be identical to baseline conditions. Industrial viewer groups in the Southeast San Francisco Landscape Unit with moderately low viewer sensitivity would not perceive a change in the visual quality. Overall, the visual quality for the Southeast San Francisco Landscape Unit would remain moderate.

CEQA Conclusion

In the Southeast San Francisco Landscape Unit, the impact under CEQA would be less than significant for both alternatives because track shifts and other modifications within and adjacent to existing railway facilities would conform to the existing character of the area. There would be no change to the existing visual quality under either alternative. Industrial viewers with moderately low viewer sensitivity would not experience a change in the existing visual character or quality of the site and its surroundings. Therefore, CEQA does not require mitigation.

Impact AVQ#4: Permanent Direct Impacts on Visual Quality—Brisbane Landscape Unit

The existing visual quality in the Brisbane Landscape Unit is moderate. Residential and commercial viewers, with moderate sensitivity to changes in visual quality, predominate in this landscape unit. Baseline and simulated views of Alternatives A and B at two KVP locations illustrate views for travelers and residents with moderate viewer sensitivity.

Alternative A

Alternative A would place a 100-acre LMF east of the existing Caltrain railway on vacant land in the Brisbane Landscape Unit. Adjacent land uses in the Brisbane Baylands area east of the railway include vacant and industrial uses, such as a former landfill, a waste transfer and

recycling facility, a lumber yard, and a fuel tank farm. Many of these land uses are visible from KVP 3 (Figure 3.15-22). The Brisbane Lagoon is immediately south of the proposed East Brisbane LMF site, as seen in KVP 4 (Figure 3.15-23). Residential areas on San Bruno Mountain are about 1 mile south, with clear views to the LMF site. Bayside development between Sierra Point and Oyster Point is 1 to 2 miles south of the proposed LMF site, but views to the LMF site would be blocked by San Bruno Mountain. There are few viewers immediately adjacent to the Caltrain railway in the Brisbane Landscape Unit other than passengers, who are travelers with moderately low viewer sensitivity, at the Bayshore Caltrain Station. Residential and commercial viewers are the primary viewer groups in the landscape unit and would have moderate viewer sensitivity due to their distance from the railway.

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Figure 3.15-22 KVP 3—Baseline and Simulation with HSR: Alternative A, Bayshore Boulevard to Brisbane Baylands

The East Brisbane LMF under Alternative A would convert vacant lands in Brisbane to an industrial use. The facility would provide storage capacity for trains, accommodate light maintenance activities, and consist of large industrial buildings and parallel outdoor storage tracks. The East Brisbane LMF would not block prominent landscape features (San Francisco skyline, San Francisco Bay, Candlestick Point, or distant hills) for viewers in residential areas on San Bruno Mountain with moderate viewer sensitivity. The LMF would be integrated into the surrounding commercial and industrial visual environment to the extent feasible. The Authority will solicit input from local jurisdictions and incorporate local aesthetic preferences into a Design Options and Aesthetics Cooperative Agreement that will be used to implement local jurisdictions' aesthetic approaches in the construction procurement documents for the LMF with regard to vegetative screening, the design of the realigned Tunnel Avenue overpass, and modifications to the Bayshore Caltrain Station (AVQ-IAMF#1, AVQ-IAMF#2).

North and south of the East Brisbane LMF, slight horizontal changes to the track and OCS configuration from the 2029 baseline conditions and the introduction of radio towers would not alter the appearance of the railway corridor. Where the railway runs immediately adjacent to the Bay Trail along the shores of the Oyster Point Lagoon, tracks and OCS would be identical to baseline conditions. Track and OCS modifications would be implemented throughout the northern half of the landscape unit, with no changes south of the Brisbane Lagoon. The relocated Tunnel Avenue overcrossing would be approximately 700 feet north of the existing overcrossing, moving the elevated roadway and approaches farther from the shoreline of the Brisbane Lagoon. This would permit a two-track, at-grade railway approach to the East Brisbane LMF to swing off the mainline tracks near the existing Tunnel Avenue overcrossing. Relocation of the overcrossing would provide additional views from Bayshore Boulevard toward the lagoon. Neither a co-located radio tower near the existing Bayshore Caltrain Station nor standalone radio tower #2 at either of two alternate sites along Bayshore Boulevard south of Tunnel Avenue in Brisbane would be near sensitive viewers. Overall, the visual quality for the Brisbane Landscape Unit under Alternative A would remain moderate.

The East Brisbane LMF under Alternative A would be visible from residential areas on San Bruno Mountain. These residential viewers would be approximately 1 mile from the East Brisbane LMF, limiting their exposure and resulting in moderate viewer sensitivity. Although the East Brisbane LMF would not block prominent landscape features viewed from these residential areas, the expanded railway infrastructure would reduce the amount of open space/undeveloped land between Brisbane and San Francisco, reducing the visual separation between the two cities. This would reduce the visual quality at KVP 4 (Figure 3.15-23) from moderately high to moderate for residents with moderate viewer sensitivity. However, the change to visual quality at this KVP would not represent a comparable change to visual quality for the Brisbane Landscape Unit because residential views would be present in a small portion of the landscape unit. Overall, visual quality for the Brisbane Landscape Unit under Alternative A would remain moderate.

Alternative B

Alternative B would place a 110-acre LMF west of the existing Caltrain railway on vacant land in the Brisbane Landscape Unit. Adjacent land uses in the Brisbane Baylands area west of the railway include vacant and industrial uses, such as the former SPRR rail yards and warehouses along Bayshore Boulevard, which are otherwise surrounded by undeveloped and vacant lands. These uses are visible from Bayshore Boulevard near Blanken Avenue, KVP 3 (Figure 3.15-24). The Brisbane Lagoon is southeast of the LMF site. Residential areas on San Bruno Mountain are about 1 mile south of the LMF site, with clear views to the LMF site, as shown by KVP 4 (Figure 3.15-25). Bayside development between Sierra Point and Oyster Point is 1 to 2 miles south of the proposed LMF site, but views to the LMF site would be blocked by San Bruno Mountain. There are few viewers immediately adjacent to the railway in the Brisbane Landscape Unit other than passengers, who are travelers with moderately low viewer sensitivity, at the Bayshore Caltrain Station. Residential and commercial viewers are the primary viewer groups in the landscape unit, with moderate viewer sensitivity due to their distance from the railway.

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Figure 3.15-23 KVP 4—Baseline and Simulation with HSR: Alternative A, East Brisbane LMF from Kings Road, Brisbane

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Figure 3.15-24 KVP 3—Baseline and Simulation with HSR: Alternative B, Bayshore Boulevard to Brisbane Baylands

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Figure 3.15-25 KVP 4—Baseline and Simulation with HSR: Alternative B, West Brisbane LMF from Kings Road, Brisbane

The West Brisbane LMF under Alternative B would provide storage capacity for trains, accommodate light maintenance activities, and entail large industrial buildings and parallel outdoor storage tracks. The West Brisbane LMF would not block views of prominent distant landscape features (San Francisco skyline, San Francisco Bay, Candlestick Point, or distant hills) from the residential areas on San Bruno Mountain. Removal of a large portion of Icehouse Hill for the West Brisbane LMF would increase residents' views of development from neighborhoods on San Bruno Mountain. The Authority will solicit input from local jurisdictions and incorporate local aesthetic preferences into a Design Options and Aesthetics Cooperative Agreement that will be used to implement local jurisdictions' aesthetic approaches in the construction procurement documents for the LMF with regard to vegetative screening, the design of the realigned Tunnel Avenue overpass, and modifications to the Bayshore Station (AVQ-IAMF#1, AVQ-IAMF#2) to soften the appearance of the LMF and rail infrastructure from residential areas. These project

features will avoid and minimize visual impacts from the West Brisbane LMF by integrating the LMF into the surrounding visual environment.

North and south of the West Brisbane LMF, slight horizontal changes to the track and OCS configuration from the 2029 baseline conditions and the introduction of radio towers would not substantially alter the appearance of the railway corridor. Where the railway runs immediately adjacent to the Bay Trail along the shores of the Oyster Point Lagoon, tracks and OCS would be identical to baseline conditions. Track and OCS modifications would be implemented throughout the northern half of the landscape unit, with no changes south of the Brisbane Lagoon. The relocated Tunnel Avenue overcrossing would be approximately 700 feet north of the existing overcrossing, moving the elevated roadway and approaches farther from the shoreline of the Brisbane Lagoon. This would provide additional views from Bayshore Boulevard toward the lagoon. Neither a co-located radio tower near the existing Bayshore Caltrain Station nor standalone radio tower #2 at either of two alternate sites along Bayshore Boulevard south of Tunnel Avenue in Brisbane would be near sensitive viewers. Overall, the visual quality for the Brisbane Landscape Unit under Alternative B would remain moderate.

The West Brisbane LMF under Alternative B would be visible from residential areas on San Bruno Mountain. These residential viewers would be approximately 1 mile from the West Brisbane LMF, limiting their exposure and resulting in moderate sensitivity. Although the West Brisbane LMF would not block views of prominent landscape features from these residential areas, the LMF would expand the existing railway facilities, require removal of an undeveloped hillside, and reduce the amount of open space/undeveloped land between Brisbane and San Francisco, resulting in a view of continuous industrial uses and reducing the visual separation between the two cities. These changes would reduce the visual quality at KVP 4 (Figure 3.15-25) from moderately high to moderate for residents with moderate viewer sensitivity. However, the change to visual quality at this KVP would not represent a comparable change to visual quality for the Brisbane Landscape Unit because residential views are present in a small percentage of the landscape unit. Overall, visual quality for the Brisbane Landscape Unit under Alternative B would remain moderate.

CEQA Conclusion

In the Brisbane Landscape Unit, the impact under CEQA would be less than significant for Alternative A. Although the East Brisbane LMF would decrease the visual quality by one level (from moderately high to moderate) for residential viewers on San Bruno Mountain, it would not substantially degrade the existing visual character or quality of the site and its surroundings because these residential viewers would have moderate sensitivity because of their distance from the LMF. Track shifts and other modifications within and adjacent to existing railway facilities would conform to the existing character of the area. Therefore, CEQA does not require mitigation.

The impact under CEQA would be less than significant for Alternative B because track shifts and other modifications within and adjacent to existing railway facilities would conform to the existing character of the area. Although the West Brisbane LMF would decrease the visual quality by one level (from moderately high to moderate) for residential viewers on San Bruno Mountain, it would not substantially degrade the existing visual character or quality of the site and its surroundings because these residential viewers would have moderate sensitivity due to their distance from the LMF. Therefore, CEQA does not require mitigation.

Impact AVQ#5: Permanent Direct Impacts on Visual Quality—South San Francisco Landscape Unit

The existing visual quality in the South San Francisco Landscape Unit is moderate. Industrial and commercial viewers with moderately low viewer sensitivity are the predominant viewer groups. There are no KVPs in this landscape unit.

Both project alternatives would be the same in the South San Francisco Landscape Unit. The HSR system would use the existing at-grade Caltrain railway tracks to accommodate HSR service. The tracks are not visually prominent through this landscape unit because of the at-grade profile and commercial and industrial development adjacent to the tracks that shields views. Industrial and commercial viewers with moderately low sensitivity are the primary viewers in this landscape unit.

Installation of four-quadrant gates and median barriers at at-grade crossings, minor shifts in track location and OCS infrastructure, and installation of a radio tower co-located with a Caltrain traction power substation (TPSS) at the existing South San Francisco Station would be perceived by viewers as minor changes to the 2029 baseline conditions and long-established railway corridor. Industrial and commercial viewers with moderately low viewer sensitivity would not perceive a change in the visual quality. Overall, the existing visual quality for the South San Francisco Landscape Unit would remain moderate.

CEQA Conclusion

In the South San Francisco Landscape Unit, the impact under CEQA would be less than significant for Alternatives A and B because track shifts and other modifications within and adjacent to existing railway facilities would conform to the existing character of the area and no change to the existing visual quality would occur under either alternative. Industrial and commercial viewers with moderately low viewer sensitivity would not experience changes in existing visual character or quality of the site and its surroundings. Therefore, CEQA does not require mitigation.

Impact AVQ#6: Permanent Direct Impacts on Visual Quality—San Bruno–Millbrae Landscape Unit

The existing visual quality in the San Bruno–Millbrae Landscape Unit is moderate. Residential viewers and travelers predominate in this landscape unit, with residents having moderate to high sensitivity to changes in visual quality and travelers having low to moderately high sensitivity. Baseline and simulated views of Alternatives A and B at two KVP locations illustrate views for travelers and residents with moderate to moderately high viewer sensitivity.

Both project alternatives would be the same in this landscape unit. The HSR system would use existing at-grade tracks to accommodate HSR service throughout most of the landscape unit. Visual changes would be the greatest at the Millbrae Station, where additional tracks would be built and the station area expanded to provide HSR service at the station.

Outside the Millbrae Station area, the installation of four-quadrant gates and median barriers at at-grade crossings, minor shifts in track location and OCS infrastructure, and installation of standalone radio tower #3 on the west side of the existing railway near either West San Marco Avenue (alternate site 1) or West Santa Lucia Avenue (alternate site 2) would be perceived by viewers as minor changes to the 2029 baseline conditions and long-established railway corridor. Residential viewers and travelers in the San Bruno–Millbrae Landscape Unit with a moderate to moderately high viewer sensitivity would not perceive a change in the visual quality throughout most of the landscape unit. Overall, the existing visual quality for the San Bruno–Millbrae Landscape Unit would remain moderate.

The existing Millbrae Station would be expanded and two additional tracks added, serving one new and one lengthened platform, to accommodate HSR trains and passengers under both project alternatives. Widening of the Hillcrest undercrossing to support the two new dedicated HSR tracks into the Millbrae Station would occur in the footprint of the existing undercrossing, so viewers would not experience changes in the visual context of the existing railway grade separation. Expansion of the Millbrae Station as illustrated at KVP 5 (Figure 3.15-26) would require the demolition of small single-story commercial buildings on the east side of El Camino Real. The new station building would be larger than the existing buildings but set back from the street and sidewalk, eliminating the pedestrian-scale facade along El Camino Real. West of the station, the commercial buildings would be replaced by a surface parking lot and a new west entrance to the expanded station. The new station building would be a single, large structure set apart from the surrounding landscape and with a more auto-oriented scale and focus—a development pattern not typically associated with a downtown commercial district. The change in the scale and development pattern would diminish the feeling of El Camino Real as part of a commercial district, reducing the cultural order from moderately high to moderately low. Under both project alternatives, the visual quality at KVP 5 from the traveler's perspective would be reduced from moderate to moderately low.

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Figure 3.15-26 KVP 5—Baseline and Simulation with HSR: Alternatives A and B, El Camino Real, Millbrae

Under both project alternatives, the historic Millbrae Depot building would be relocated to accommodate track modifications as illustrated at KVP 6 (Figure 3.15-27). The existing trees would obscure the relocated Millbrae Depot from view. The relocation of the depot and displayed vintage rail passenger car would open a wider view of the railway corridor and Millbrae Avenue overcrossing from the street, increasing the prominence of the rail corridor. Under either project alternative, the visual quality at KVP 6 from the perspective of residents with moderately high viewer sensitivity would decrease from moderately low to low.

However, the change in visual quality at KVPs 5 and 6 would not represent a comparable change to visual quality for the San Bruno–Millbrae Landscape Unit because the Millbrae Station area is a small element of the overall landscape unit. Overall, visual quality for the San Bruno–Millbrae Landscape Unit under Alternatives A and B would remain moderate.

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Figure 3.15-27 KVP 6—Baseline and Simulation with HSR: Alternatives A and B, Historic Millbrae Depot Building, Millbrae

CEQA Conclusion

In the San Bruno–Millbrae Landscape Unit, the impact under CEQA would be less than significant for Alternatives A and B because track shifts and other modifications within and adjacent to existing railway facilities would conform to the existing character of the area. The expansion of tracks and station facilities at the Millbrae Station would decrease the visual quality by one level (from moderate to moderately low) for travelers along El Camino Real with moderate viewer sensitivity and would decrease the visual quality by one level (from moderately low to low) for residential viewers along California Drive with moderately high viewer sensitivity. It would not substantially degrade the existing visual character or quality in the San Bruno–Millbrae Landscape Unit for most viewers. Therefore, CEQA does not require mitigation.

Impact AVQ#7: Permanent Direct Impacts on Visual Quality—Burlingame Landscape Unit

The existing visual quality in the Burlingame Landscape Unit is moderately high. Residential viewers are the predominant viewer group, but few have high exposure to the project, resulting in moderate sensitivity across all viewer groups. There are no KVPs in this landscape unit.

Both project alternatives would be the same in the Burlingame Landscape Unit. The HSR system would use the existing at-grade tracks to accommodate HSR service. Adjacent development consists of commercial, residential, and industrial buildings. Residential viewers make up most viewers in this landscape unit, with some retail, commercial, industrial, recreational, and traveler viewers. Most residential views of the Caltrain railway are blocked by landscaping, resulting in moderately low viewer sensitivity.

Slight horizontal changes to the track and OCS configuration from the 2029 baseline conditions would not alter the existing character of the railway corridor, nor would installation of a radio tower co-located at an existing Caltrain paralleling station or reconstruction of the Broadway Caltrain Station with two outboard platforms. Residential viewer groups in the Burlingame Landscape Unit with moderate sensitivity would not perceive a change in the visual quality. Overall, the existing visual quality for the Burlingame Landscape Unit would remain moderately high.

CEQA Conclusion

In the Burlingame Landscape Unit, the impact under CEQA would be less than significant under Alternatives A and B because track shifts and other modifications within and adjacent to existing railway facilities would conform to the area's existing character. There would be no change to the existing visual quality under either alternative. Residential viewers with moderate sensitivity would not experience a change in existing visual character or quality. Therefore, CEQA does not require mitigation.

Impact AVQ#8: Permanent Direct Impacts on Visual Quality—San Mateo–Redwood City Landscape Unit

The existing visual quality in the San Mateo–Redwood City Landscape Unit is moderate. Commercial, industrial, and residential viewers predominate in this landscape unit, with residential viewers having moderate to moderately high sensitivity and commercial and industrial viewers having moderately low sensitivity. Baseline and simulated views for both alternatives at four KVP locations are illustrated on Figure 3.15-28 through Figure 3.15-31.

Alternative A

Under Alternative A, the HSR system would use the existing at-grade tracks. Improving grade crossings with four-quadrant gates and median barriers and minor shifts in track and OCS location would be perceived by viewers as minor changes to the 2029 baseline conditions and long-established railway corridor. Curve straightening in the vicinity of the Hayward Park Station and reconstruction of the station would take place within the existing railway right-of-way, and the reconstructed station would have the same features as the existing station, resulting in no change to the visual character in the immediate area. This is demonstrated at KVPs 7, 8, and 9, where the view would be unchanged from the baseline condition (no simulations of these unchanged views are provided here; refer to Figures 5-39 through 5-41 in the San Francisco to San Jose Aesthetics and Visual Quality Technical Report [Authority 2019a]). KVP 10 (Figure 3.15-31) illustrates a retail viewer's perspective of the installation of four-quadrant gates at Broadway in Redwood City.

Alternative A would introduce four new standalone radio towers at alternate site options and one co-located radio tower in the San Mateo–Redwood City Landscape Unit. Most of the radio tower sites would be away from sensitive viewers or co-located with existing Caltrain facilities, resulting in no alteration of the overall appearance of the landscape unit. An exception would be alternate site 1 for standalone radio tower #5, which would be located near the Belmont Caltrain Station in direct view of highly sensitive residential viewers on the hillside above El Camino Real. These viewers, however, represent a very small percentage of total residential viewers in the landscape unit. Viewer groups in the San Mateo–Redwood City Landscape Unit, including residential viewers with moderate to moderately high sensitivity, would not perceive a change in the visual quality. Overall, the existing visual quality of the San Mateo–Redwood City Landscape Unit would remain moderate.

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Figure 3.15-28 KVP 7—Baseline and Simulation with HSR: Alternative B, South B Street, San Mateo

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Figure 3.15-29 KVP 8—Baseline and Simulation with HSR: Alternative B, El Camino Real at 39th Avenue, San Mateo

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Figure 3.15-30 KVP 9—Baseline and Simulation with HSR: Alternative B, San Carlos Caltrain Station, San Carlos

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Figure 3.15-31 KVP 10—Baseline and Simulation with HSR: Alternatives A and B, Broadway, Redwood City

Alternative B

Under Alternative B, changes to visual character and quality would be the same as described for Alternative A outside the area of the passing track (north of Ninth Avenue in San Mateo and south of Whipple Avenue in Redwood City) because both project alternatives would be the same in these areas. In the passing track area (between Ninth Avenue and Whipple Avenue) under Alternative B, the existing two-track railway would be expanded to four tracks through San Mateo, Belmont, San Carlos, and northern Redwood City. Construction of the passing track would require acquisition and demolition of some existing buildings along the right-of-way to accommodate the widened rail corridor as shown in KVPs 7 and 8. Alternatives A and B would be the same at KVP 10, with the same impacts as described for Alternative A. The expansion of the railway to four tracks would increase its scale and visual presence. Impacts would occur where the increased scale and visual presence would contrast with the existing visual environment.

Design standards for the HSR infrastructure include approaches to integrate HSR infrastructure in a community and to reduce its intrusiveness, reducing impacts on views (AVQ-IAMF#1). While the design characteristics of the project will reduce impacts, they cannot avoid the intrusiveness of HSR

infrastructure when viewed by sensitive viewers. Efforts to reduce the aesthetic and visual impacts of HSR will be guided by a local aesthetic review process (AVQ-IAMF#2).

At KVP 7 (Figure 3.15-28), Alternative B would require the removal of several homes on the east side of South B Street to allow for passing tracks and curve straightening. With the homes and landscaping on the east side of South B Street removed, partial views would be opened up to the railway corridor. The residential character of the view would be permanently diminished through the removal of a large portion of the continuous row of homes on the east (left) side of the street and the intrusion into the visual environment of the railway tracks, OCS, and passing trains. These changes would reduce the visual quality at KVP 7 from moderately high to moderately low for residents with high viewer sensitivity.

At KVP 8 (Figure 3.15-29), all buildings and landscaping between El Camino Real and the railway would be removed to accommodate the expanded railway. New street trees lining the roadway would be planted at regular intervals. AVQ-IAMF#1 and AVQ-IAMF#2 will harmonize the landscaping, fencing, and other improvements along the roadway with the streetscape and design guidelines of the Grand Boulevard Initiative for El Camino Real, but the roadway would remain a wide, major arterial, with signage and parking oriented to attracting customers traveling at higher speeds. Visual quality at KVP 8 would remain moderately low when viewed by travelers with moderate sensitivity driving on El Camino Real.

At KVP 9 (Figure 3.15-30), the expansion of the Caltrain railway to four tracks as it passes behind the historic San Carlos Depot building would increase the visual presence of the railway. The taller OCS, necessary to span four tracks, would reduce the prominence of the palm trees and expand the features of the railway corridor upward, reducing clear views to the sky. The trains, operating closer to the viewpoint and depot, would increase in prominence. The prominence of the depot building would be diminished. Because of the depot's location at the end of San Carlos Avenue in the city's downtown business district, retail viewers and travelers would have high exposure to the station and moderately high viewer sensitivity. These viewers would experience a decline in visual quality from moderately high to moderate.

Alternative B would be the same as Alternative A at KVP 10 in Redwood City (Figure 3.15-31). Retail viewers with moderate sensitivity walking in downtown Redwood City would not perceive a change in the visual quality at KVP 10.

CEQA Conclusion

In the San Mateo–Redwood City Landscape Unit, the impact under CEQA would be less than significant for Alternative A because track shifts and other modifications, including new radio towers, within and adjacent to existing railway facilities would conform to the existing character of the area. Residents with moderate to moderately high viewer sensitivity would not experience a change in existing visual character or quality. Therefore, CEQA does not require mitigation.

The impact under CEQA would be significant for Alternative B because the expansion of railway infrastructure would reduce visual quality of the residential area shown in KVP 7 two levels (from moderately high to moderately low for residential viewers with high sensitivity), and one level at the historic San Carlos Depot building at KVP 9 (from moderately high to moderate for retail viewers and travelers with moderately high viewer sensitivity). In these locations, the expanded railway would intrude on adjacent land uses and contrast with the residential character of the area or the historic San Carlos Depot building. Mitigation measures to address this impact are identified in Section 3.15.10. Section 3.15.7 describes the measures in detail. In other locations throughout the landscape unit (e.g., KVPs 8 and 10), track shifts and other modifications within and adjacent to existing railway facilities would conform to the existing character of the area such that the visual quality would not change.

Impact AVQ#9: Permanent Direct Impacts on Visual Quality—Atherton–Mountain View Landscape Unit

The existing visual quality in the Atherton–Mountain View Landscape Unit is moderately high. Residential viewers with moderate to high viewer sensitivity are the predominant viewer group, although few of these viewers have high exposure to the Caltrain railway because it is obscured in most areas by intervening roadways or dense landscaping. Baseline and simulated views of Alternatives A and B at three KVP locations illustrate views for recreational and retail viewers with moderate to high sensitivity (Figure 3.15-32 through Figure 3.15-34).

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Figure 3.15-32 KVP 11—Baseline and Simulation with HSR: Alternatives A and B, Menlo Park Caltrain Station

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Figure 3.15-33 KVP 12—Baseline and Simulation with HSR Alternatives A and B, El Palo Alto

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Figure 3.15-34 KVP 13—Baseline and Simulation with HSR: Alternatives A and B, Peers Park

Both project alternatives would be the same in the Atherton–Mountain View Landscape Unit. The HSR trains would use the existing at-grade tracks to accommodate HSR service through Atherton, Menlo Park, Palo Alto, and Mountain View. Adjacent development consists of suburban residential development that constitutes most of the landscape unit. Along most of the corridor, dense landscaping obscures residential views to the railway and to distant hills or the Bay.

Slight horizontal changes to the track and OCS configuration and installation of median barriers and four-quadrant gates at at-grade crossings would not alter the existing character of the railway corridor. Both project alternatives would introduce three new standalone radio towers with alternate site options within the Atherton–Mountain View Landscape Unit. Most radio tower sites would be away from sensitive viewers or co-located with existing Caltrain facilities, resulting in no alteration of the overall appearance of the landscape unit. Two exceptions are alternate site 1 for radio tower #8 and alternate site 2 for radio tower #8a. Radio tower #8 alternate site 1 is north of Embarcadero Road in Palo Alto, across the street from highly sensitive residential viewers. Radio tower #8a alternate site 2 on Park Boulevard in Palo Alto would be between two residences and across from Robles Park, affecting highly sensitive residential and recreational viewers. Because

the sensitive viewers around these two alternative radio tower sites represent a very small percentage of total residential and recreational viewers in the Atherton–Mountain View Landscape Unit, selection of one or both of these radio tower sites would not substantially degrade the visual quality for this landscape unit.

Representative examples of visual changes under both project alternatives in the Atherton–Mountain View Landscape Unit are illustrated on Figures 3.15-32 through 3.15-34. As illustrated on these figures, no changes to the baseline conditions are anticipated to affect views of the historic Menlo Park Caltrain Station from a traveler's perspective (KVP 11), the recreational viewer's perspective at El Palo Alto (KVP 12), or the recreational viewer's perspective within Peers Park (KVP 13). Viewer groups at each of these KVPs would not perceive a change in the visual quality. Overall, most residential viewers with moderately high viewer sensitivity in this landscape unit would not experience a change in existing visual character or visual quality. The visual quality for the Atherton–Mountain View Landscape Unit would remain moderately high.

CEQA Conclusion

The impact under CEQA would be less than significant for Alternatives A and B in the Atherton–Mountain View Landscape Unit because track shifts and other modifications within and adjacent to existing railway facilities would conform to the existing character of the area and would not change the existing visual quality under either alternative. Residential viewers and recreationists with moderately high to high sensitivity would not experience a substantial degradation in existing visual character or visual quality. Therefore, CEQA does not require mitigation.

Impact AVQ#10: Permanent Direct Impacts on Visual Quality—Sunnyvale Landscape Unit

The existing visual quality in the Sunnyvale View Landscape Unit is moderate. Residential viewers with moderately high viewer sensitivity and commercial viewers with moderately low viewer sensitivity are the predominant viewer groups. Baseline and simulated views of Alternatives A and B at one location illustrate the view of recreational and retail viewers with moderate to high sensitivity.

Both project alternatives would be the same in the Sunnyvale Landscape Unit. The HSR trains would use the existing at-grade tracks to accommodate HSR service. Adjacent development consists of a mix of residential, industrial, and commercial uses. Residential areas adjacent to the railway within this landscape unit are generally visually screened from the railway by noise barriers and landscaping. Viewers in the Sunnyvale Landscape Unit are primarily split between commercial and residential, with smaller numbers of industrial, recreational, and traveler viewers.

The installation of four-quadrant crossing gates at Sunnyvale Avenue is typical of the changes to the visual environment within this landscape unit. At KVP 14 (Figure 3.15-35), the visual change from 2029 baseline conditions would be very minor, with the additional crossing gates and raised median making the crossing slightly more prominent. Visual quality at KVP 14 would remain moderate, as travelers with moderately low viewer sensitivity at this KVP would not perceive a change in the visual quality under Alternative A or B.

Minor changes to the track and OCS configuration, median barriers, and four-quadrant gates at at-grade crossings would not alter the existing character of the railway corridor, nor would installation of either of the alternate sites for standalone radio tower #10. These project features would be perceived by viewers as minor changes to the 2029 baseline conditions and long-established railway corridor; accordingly, no change to visual quality would occur. Viewer groups in the Sunnyvale Landscape Unit, including residential viewers with moderately high viewer sensitivity, would not perceive a change in the visual quality. Overall, the visual quality for the Sunnyvale Landscape Unit would remain moderate.

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Figure 3.15-35 KVP 14—Baseline and Simulation with HSR: Alternatives A and B, Sunnyvale Avenue

CEQA Conclusion

In the Sunnyvale Landscape Unit, the impact under CEQA would be less than significant under Alternatives A and B because track shifts and other modifications within and adjacent to existing railway facilities would conform to the existing character of the area. Residential viewers with moderately high sensitivity would not experience a change in existing visual character or quality. Therefore, CEQA does not require mitigation.

Impact AVQ#11: Permanent Direct Impacts on Visual Quality—Santa Clara Landscape Unit

The existing visual quality in the Santa Clara Landscape Unit is moderately high. No viewer group predominates in the landscape unit, so overall viewer sensitivity is considered moderately low. Existing, baseline, and simulated views of Alternatives A, B (Viaduct to Scott Boulevard), and B (Viaduct to I-880) at three KVP locations illustrate views from residential viewers with moderately high sensitivity (one location) and travelers with moderate to low sensitivity (two locations).

Alternative A

Under Alternative A, the HSR system would use existing and new at-grade tracks through Santa Clara and San Jose, with minor horizontal track shifts to accommodate HSR operations in blended operations with Caltrain. The addition of a TPSS adjacent to a Caltrain TPSS facility in an existing industrial area and other rail infrastructure would not block any views. Visual quality would remain moderately high in the landscape unit. Visual quality would be unchanged from the baseline condition at KVPs 15, 16, and 17. Accordingly, the baseline views represented in Figure 3.15-36 through Figure 3.15-38 also reflect views under Alternative A. Viewer groups in the Santa Clara Landscape Unit would not perceive a change in visual quality under Alternative A.

Alternative B (Viaduct to I-880)

Under Alternative B (Viaduct to I-880), the HSR system would use existing and new at-grade tracks to accommodate HSR service through Santa Clara and San Jose. The additional rail infrastructure would include new trackways, OCS, improved fencing, and other related infrastructure within and adjacent to existing railway facilities. The addition of a new TPSS facility southeast of the Caltrain right-of-way where it crosses I-880 would be in an existing industrial area, and other rail infrastructure would not block any views. Viewers in the landscape unit include residents, whose sensitivity ranges from moderate to high, and other viewers with low to moderately low sensitivity.

Because the infrastructure would be within and adjacent to existing railway facilities, the baseline visual character of the landscape unit would not change. The visual quality would remain moderately high. Viewers would perceive no change in visual quality under Alternative B (Viaduct to I-880) in the Santa Clara Landscape Unit, either because the view would be the same as the baseline condition or because the changes would not be visible. Accordingly, the baseline views represented in Figures 3.15-36 through 3.15-38 also reflect views under Alternative B (Viaduct to I-880).

Alternative B (Viaduct to Scott Boulevard)

A new aerial structure would be introduced through the landscape unit, rising to heights of more than 60 feet above grade to pass over roads and highways. The structure would be taller than surrounding homes, offices, and other buildings adjacent to the railway corridor and would impart an industrial aesthetic to the landscape, in contrast to the scale, materials, and style of the adjacent buildings and historic Santa Clara Railroad Historical Complex.

The Authority has created a guidance document, *Draft Design Opportunities for Local Jurisdictions and Aesthetic Requirements* (Authority 2017), to provide local jurisdictions with examples of aesthetic options for the HSR infrastructure that include approaches to integrate structures within a community and to reduce the intrusiveness of large, elevated structures, reducing impacts on views. In addition, the Authority has prepared an *Aesthetics Manual for Non-Station Structures* (Authority 2014) that establishes principles to guide designers responding to requests for proposals for design-build services toward an appropriate level of aesthetic quality in their design. (AVQ-IAMF#1). A Design Options and Aesthetics Cooperative Agreement will be used to implement local jurisdictions' aesthetic approaches in the construction procurement documents (AVQ-IAMF#2). While these project features will reduce impacts, the height and depth of the aerial structure under Alternative B (Viaduct to Scott Boulevard) would partially block some distant views to scenic vistas from the landscape unit, including the Diablo Range and Mount Hamilton. Visual quality in the landscape unit would decline from moderately high to moderate. While residents in the landscape unit have moderately high to high viewer sensitivity, most viewers have moderately low sensitivity. Viewers with moderately low sensitivity would experience a decline in visual quality from moderately high to moderate under Alternative B (Viaduct to Scott Boulevard).

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Figure 3.15-36 KVP 15—Baseline and Simulation with HSR: Alternatives A and B, Main Street

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Figure 3.15-37 KVP 16—Baseline and Simulation with HSR: Alternatives A and B, I-880

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Figure 3.15-38 KVP 17—Baseline and Simulation with HSR: Alternatives A and B, West Hedding Street

Two tracks for HSR would be added to the existing two Caltrain tracks, replacing the baseline OCS, which would be similar in scale to the electrical poles in the neighborhood, with a steel OCS that would be taller and would use a beam to suspend the OCS across all four tracks (KVP 15, Figure 3.15-36). At KVP 15, the primary viewers are residents of the neighborhood. With their high visual sensitivity, they would experience a decline in visual quality from moderately high to moderate under Alternative B (Viaduct to Scott Boulevard).

Alternative B (Viaduct to Scott Boulevard) would pass over the I-880 freeway, partially blocking views to the Diablo Range, but adding a distinct landmark (KVP 16, Figure 3.15-37). Visual quality would remain moderately high. Travelers in this location have low viewer sensitivity due to usual heavy traffic that requires focus on the road. They would not perceive a change in visual quality at KVP 16 under Alternative B (Viaduct to Scott Boulevard).

Under Alternative B (Viaduct to Scott Boulevard), Hedding Street would pass under the Caltrain/UPRR tracks, with a new viaduct carrying the HSR over the roadway (KVP 17, Figure 3.15-38). While the view would change, there would be no change to visual quality, which would remain moderately high. Travelers with moderate viewer sensitivity would not perceive a change in visual quality under Alternative B (Viaduct to Scott Boulevard) at KVP 17.

CEQA Conclusion

The impact under CEQA would be less than significant for Alternative A in the Santa Clara Landscape Unit because modifying the baseline Caltrain and UPRR railway to permit blended HSR operations at grade within and adjacent to baseline railway facilities would conform to the existing character of the area. Visual quality in the landscape unit would be unchanged, remaining moderately high. Most viewers would be travelers and industrial viewers with moderately low viewer sensitivity who would not experience any change in existing visual character or quality of the site and its surroundings. Therefore, CEQA does not require mitigation.

The impact under CEQA would be less than significant for Alternative B (Viaduct to I-880) because building the HSR infrastructure at grade within and adjacent to existing railway facilities would conform to the baseline character of the area. Visual quality in the landscape unit would be unchanged, remaining moderately high. Most viewers would be travelers and industrial viewers with moderately low viewer sensitivity who would not experience any change in existing visual character or quality of the site and its surroundings. Therefore, CEQA does not require mitigation.

The impact under CEQA would be less than significant for Alternative B (Viaduct to Scott Boulevard) because, while construction of a viaduct for HSR would alter the baseline visual quality of the Santa Clara Landscape Unit, it would only reduce visual quality one level (from moderately high to moderate). Most viewers would be travelers and industrial viewers with moderately low viewer sensitivity who would not respond to the change in existing visual character or quality of the site and its surroundings. Therefore, CEQA does not require mitigation.

Impact AVQ#12: Permanent Direct Impacts on Visual Quality—Diridon Station Landscape Unit

The existing visual quality in the Diridon Station Landscape Unit is moderate. Travelers and commercial viewers make up the majority of the viewers in this landscape unit, with moderate sensitivity, but there are also a few highly sensitive residential viewers. Existing, baseline, and simulated views of Alternatives A and B at three KVP locations illustrate views from highly sensitive residential viewers (one location) and travelers with moderate sensitivity (two locations). The Diridon Station is part of a historic district listed in the NRHP. Please refer to Section 3.16 for a discussion of the historic district and impacts on the district relative to its status as a historic property.

Alternative A

All changes for Alternative A would take place within the existing rail facilities (Figure 3.15-39 through Figure 3.15-41). The modifications of tracks and OCS, HSR signage, and modified platforms would not create obvious alterations to the existing station and its surroundings. The new station building for HSR would be similar in size to the existing historic Diridon Station building, but constructed of materials that clearly differentiate it from the historic structure. Visual quality would be unchanged, remaining moderate. Viewers would not perceive a change to visual quality. The vertical profile would be the same for Alternative A with and without the DDV. Alternative A with the DDV would require additional at-grade encroachment of up to 23 feet into the SAP Center parking lot compared to Alternative A without the DDV, but it would not change the visual quality of the parking lot. In addition, the DDV would encroach on one additional commercial property and displace one additional commercial structure compared to Alternative A without the DDV. The additional building removal under Alternative A with the DDV would not materially degrade the visual quality or views from surrounding areas compared to the aesthetic effects of Alternative A without the DDV.

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Figure 3.15-39 KVP 18—Baseline and Simulation with HSR: Alternative A, Caltrain from The Alameda

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Figure 3.15-40 KVP 19—Baseline and Simulation with HSR: Alternative A, Caltrain from West Santa Clara Street

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Figure 3.15-41 KVP 20—Baseline and Simulation with HSR: Alternative A, Diridon Station

Alternative B

Under Alternative B, a new elevated structure (viaduct) and station would be constructed to accommodate HSR service through the landscape unit (Figure 3.15-42). Design features drawn from the ongoing planning process led by the City of San Jose will provide a high-quality architectural treatment of the HSR station and facilities. The viaduct, at a height of more than 60 feet above grade to pass over roads and highways, would be taller than most surrounding homes, offices, and other buildings adjacent to the railway corridor. The height and depth of the viaduct structure would block distant views of the San Jose skyline, while the height and length of the elevated concourse and railway platforms could visually overpower the historic San Jose Diridon Station facilities. The HSR infrastructure would contrast in scale, materials, and style with the surrounding buildings. Visual quality would decrease from moderate to moderately low in an area with moderately high viewer sensitivity. Residential viewers on the west side of the railway have high viewer sensitivity, but most are travelers and commercial viewers with low to moderate visual sensitivity.

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Figure 3.15-42 KVP 18—Baseline and Simulation with HSR: Alternative B, Caltrain from The Alameda

Views toward downtown San Jose from The Alameda neighborhood would be blocked by HSR infrastructure and new developments east of the station, and the scale and shadows of the aerial HSR structure would change the visual character (Figure 3.15-42). While the glass concourse over the tracks (to the right of the view) would neatly enclose the platform area of the at-grade facilities, the bulk of the concrete comprising the HSR platform level would appear vastly out of scale with all the surrounding structures. The aerial structure would dominate the view. The at-grade platforms for Caltrain, ACE, Amtrak, and Capitol Corridor trains would be in shadow, reducing their visibility from outside the site. The at-grade platforms, historic railway bridge, and The Alameda/West Santa Clara Street would be shaded by the elevated station and viaduct, reducing their daytime light levels. Visual quality would decline from moderate to moderately low. Residents with high viewer sensitivity in the neighborhood immediately west of the station would experience a decline in visual quality from moderate to moderately low under Alternative B at KVP 18. While the project will minimize the intrusiveness of large, elevated structures (AVQ-IAMF#1, AVQ-IAMF#2), the loss of residential views would be unavoidable under both viaduct options.

The HSR would operate on a high aerial structure above the existing railway services at the San Jose Diridon Station (KVP 19, Figure 3.15-43). A distant glimpse of the Santa Cruz Mountains would remain visible down West Santa Clara Street beneath the HSR viaduct, as would the trees in the parking lots on the south side of West Santa Clara Street. The arena would continue to dominate the view, and the new elevated HSR facilities would complement its scale. The scale and visibility of the HSR infrastructure would contribute to the visual identity of the San Jose Diridon Station area as a significant civic hub in the region. Visual quality at KVP 19 would increase from moderate to moderately high. The primary viewers on the east side of San Jose Diridon Station are travelers of all kinds, including daily commuters and people attending events at the arena, with moderate viewer sensitivity. They would experience an increase in visual quality from moderate to moderately high at KVP 19 under Alternative B.

The height and length of the elevated HSR mezzanine and platforms would visually dominate the historic San Jose Diridon Station, contrasting with the existing historic station building in materials and scale (KVP 20, Figure 3.15-44). The area in front of the historic station building on Cahill Street would be expanded into a plaza, and palm trees would line Cahill Street. The new HSR station would create a prominent visual symbol of the addition of HSR service to the existing passenger railway operations in the corridor. The primary viewers are travelers with moderate viewer sensitivity, and visual quality would remain moderately high. Viewers would not perceive a change in visual quality under Alternative B at KVP 20.

CEQA Conclusion

The impact under CEQA would be less than significant for Alternative A in the Diridon Station Landscape Unit because modifying the baseline railway and Diridon Station platforms to permit blended HSR operations at grade within and adjacent to railway facilities would conform to the baseline character of the area. Visual quality in the landscape unit would be unchanged, remaining moderate. Most viewers would be travelers with moderate viewer sensitivity who would not experience any change in existing visual character or quality of the site and its surroundings. Therefore, CEQA does not require mitigation.

The impact under CEQA would be less than significant for Alternative B because, while construction of a viaduct for HSR would alter the baseline visual quality of the Diridon Station Landscape Unit, it would only reduce visual quality from moderate to moderately low. Although visual quality in the landscape unit would decrease by one level, most viewers would be travelers with moderate viewer sensitivity who would not respond to the change in existing visual character or quality of the site and its surroundings. Therefore, CEQA does not require mitigation.

The existing visual quality in the San Jose Station Approach Landscape Unit is moderately high. Viewers include residents, travelers, recreationists, students, and teachers. Overall viewer sensitivity in the landscape unit is moderately high. Existing and simulated views of Alternative A at three KVPs and Alternative B at two KVPs illustrate views for travelers with moderate sensitivity and residential viewers with high sensitivity.

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Figure 3.15-43 KVP 19—Baseline and Simulation with HSR: Alternative B, Caltrain from West Santa Clara Street

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Figure 3.15-44 KVP 20—Baseline and Simulation with HSR: Alternative B, Diridon Station

Impact AVQ#13: Permanent Direct Impacts on Visual Quality—San Jose Station Approach Landscape Unit

Alternative A

Alternative A would use the existing Caltrain/UPRR corridor through the landscape unit. The existing two-track railway would be expanded to three tracks to support blended HSR/Caltrain service. The third track would be added to the south/west side of the existing tracks. New, single-track bridges would be built next to existing bridges across I-280, Prevost Street, SR 87, Willow Street, Alma Street, and Almaden Road. The existing bridges across Bird Avenue and Delmas Street would be reconstructed to carry three tracks. The tracks would be raised slightly

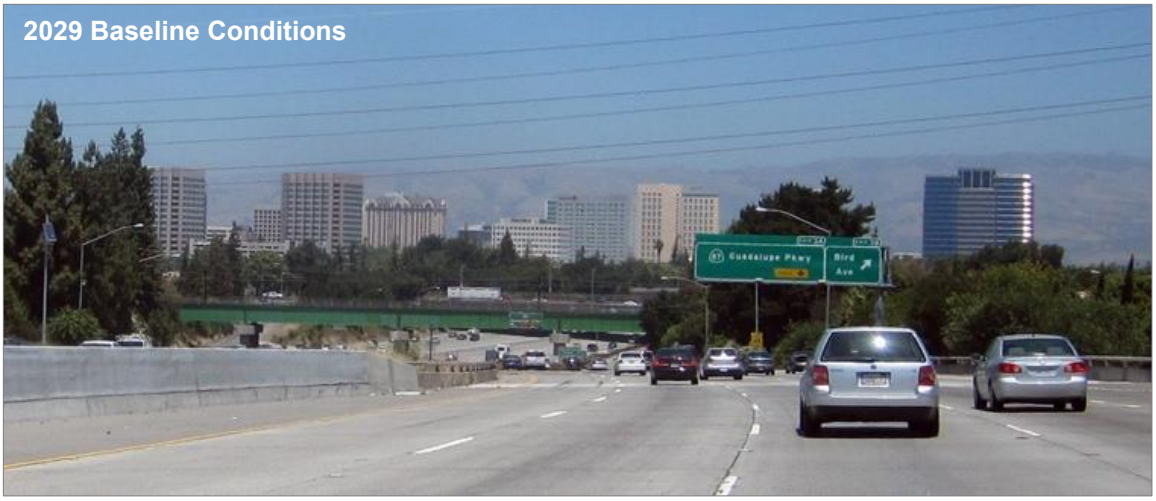
(approximately 5 feet) to permit construction of the new bridges. The Tamien Caltrain Station would remain in place, with the midday train storage tracks south of the station shifted from west to east of the mainline tracks.

The addition of at-grade tracks with associated OCS and other rail infrastructure would not block distant views but would require the removal of some trees adjacent to the railway. With almost all construction within or immediately adjacent to the existing railway, there would be little change to the visual environment away from the railway. Views across the railway corridor would still be open. Where new bridges are added or rebuilt to carry the third track, the Authority's aesthetic guidelines and aesthetic review process will reduce the aesthetic and visual impacts of the project by increasing the compatibility of the HSR infrastructure in an existing, specific local design context, such as providing special design treatments to match or complement existing railway structures (AVQ-IAMF#1, AVQ-IAMF#2).

Because the railway would be at grade, existing landscaping and walls that screen residents' views to the corridor would limit their exposure. Residents with moderately high visual sensitivity would not perceive a change in visual quality under Alternative A in the San Jose Station Approach Landscape Unit.

At KVP 21 (Figure 3.15-45), HSR would operate in blended service with Caltrain, requiring a new, single-track bridge to span I-280 on the west (foreground) side of the existing two-track Caltrain/UPRR bridge. The new bridge, constructed of concrete piers and steel plates, would be similar in appearance to the existing bridge. The new bridge across the freeway would not alter views of existing stands of trees or block distant views to the Diablo Range. Overall visual quality would remain moderately high. Travelers with moderate viewer sensitivity would not perceive a change in visual quality under Alternative A at KVP 21. Because Alternative A would not pass KVP 22, there would be no impacts on visual quality at that location.

At KVP 23 (Figure 3.15-46), Alternative A would add a third track to the existing railway, moving tracks slightly closer to the viewpoint and requiring construction of a retaining wall, visible in the simulation. No trees would be removed from Fuller Park or along Fuller Avenue. The church, lawn of Fuller Park, and streetscape would be unaltered. New fencing along the railway and a train control box would intrude into the corner of the park but would do little to affect the sense of community in the area, although the new fencing and retaining wall would increase the presence of the railway. Visual quality would remain moderate. Residents or recreationists with moderately high visual sensitivity would not perceive a change in visual quality at KVP 23.



APRIL 2018

Figure 3.15-45 KVP 21—Baseline and Simulation with HSR: Alternative A, San Jose Skyline

APRIL 2018

Figure 3.15-46 KVP 23—Baseline and Simulation with HSR: Alternative A, Fuller Avenue

At KVP 24 (Figure 3.15-47), the existing Caltrain/UPRR bridge over Delmas Avenue would be replaced with a new bridge to carry three tracks for UPRR and blended HSR/Caltrain operations. All existing trees and buildings would also be unaltered, but the rail bridge would be rebuilt. The Authority's aesthetic guidelines and aesthetic review process will reduce the aesthetic and visual impacts of the bridge replacement by providing special design treatments to match or complement existing railway structures (AVQ-IAMF#1, AVQ-IAMF#2). The appearance of the railway would change only slightly. The approximate height and span of the new bridge would not change substantially from the existing bridge. Visual quality would remain moderately low. Residents with high visual sensitivity would not perceive a change in visual quality at KVP 24 under Alternative A.

Alternative B

Alternative B would use a new viaduct to connect San Jose Diridon and Tamien Stations by following the I-280 and SR 87 corridors. South of Tamien Station the alignment would transition to at grade within the existing Caltrain/UPRR corridor. Viewers include residents, travelers, recreationists, students, and teachers. Overall viewer sensitivity in the landscape unit is moderately high.

HSR would be on a high aerial structure above the I-280 and SR 87 freeway interchange (KVP 21, Figure 3.15-48). The elevation of the structure would obscure some of the trees that frame the view of the downtown skyline but would not obscure the distant view to the Diablo Range. During design, the Authority's aesthetic guidelines and aesthetic review process will minimize the project's aesthetic and visual impacts by increasing the compatibility of the HSR infrastructure in an existing, specific local design context, such as providing special design treatments for the I-280/SR 87 freeway interchange aerial structure (AVQ-IAMF#1, AVQ-IAMF#2). The addition of the aerial structure provides another visual indication that multiple transportation services are converging to serve the city of San Jose. As with the distant views to the mountains, its elevation also nicely frames the view of the skyline. Overall visual quality remains moderately high when viewed by travelers with moderate viewer sensitivity.

HSR infrastructure for Alternative B would introduce permanent changes to visual character that would contrast with the residential setting of the Gardner neighborhood, as seen at West Virginia Street, bordering the playfields at the Gardner School (KVP 22, Figure 3.15-49). The scale and position of the elevated structure would introduce a view of an elevated transportation infrastructure at the edge of the existing neighborhood. It would block the scenic vista to downtown, creating a visual barrier between the Gardner neighborhood and the center of San Jose. Residential viewers with moderately high viewer sensitivity would experience a decline in visual quality from moderate to moderately low. Because Alternative B would not pass KVP 23 and KVP 24, there would be no impacts on visual quality at those locations.

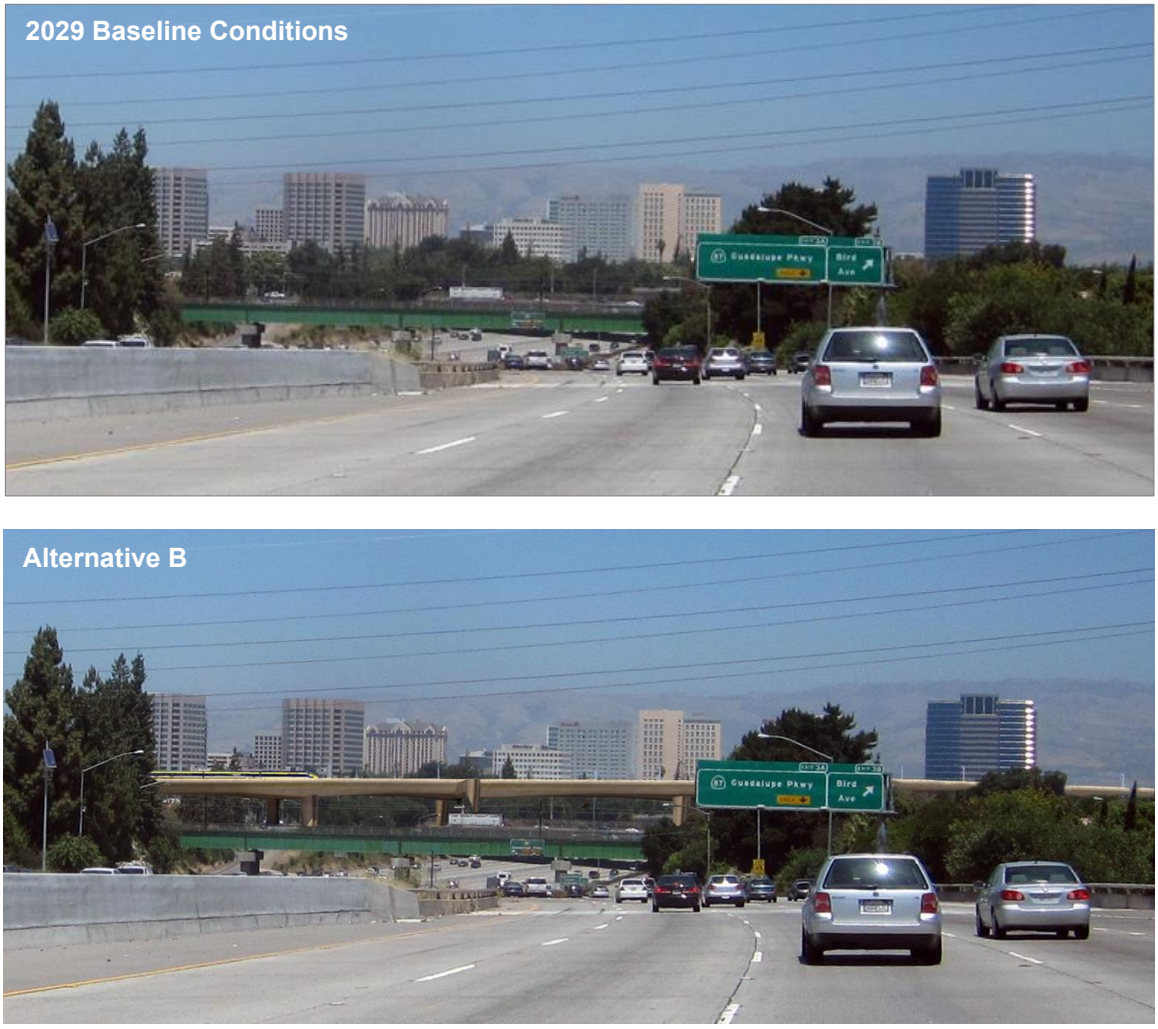
CEQA Conclusion

The impact under CEQA would be less than significant for Alternative A in the San Jose Station Approach Landscape Unit because modifying the baseline Caltrain and UPRR railway and grade separations to permit blended HSR operations at grade within and adjacent to baseline railway facilities would conform to the baseline character of the area. Visual quality in the landscape unit would be unchanged, remaining moderately high. Most viewers would be residents with moderately high viewer sensitivity who would not experience any change in existing visual character or quality of the site and its surroundings. Therefore, CEQA does not require mitigation.

The impact under CEQA would be less than significant for Alternative B because, while construction of a viaduct for HSR would alter the existing visual quality of the San Jose Station Approach Landscape Unit, it would only reduce visual quality by one level (from moderately high to moderate). Most viewers would be residents with moderately high viewer sensitivity who would not respond to the change in existing visual character or quality of the site and its surroundings. Therefore, CEQA does not require mitigation.

APRIL 2018

Figure 3.15-47 KVP 24—Baseline and Simulation with HSR: Alternative A, Delmas Avenue



APRIL 2018

Figure 3.15-48 KVP 21—Baseline and Simulation with HSR: Alternative B, San Jose Skyline from I-280

APRIL 2018

Figure 3.15-49 KVP 22—Baseline and Simulation with HSR: Alternative B, Gardner School

Operations Impacts

Project operations would include scheduled HSR train service and inspection and maintenance activities along the track and railroad right-of-way, as well as on the structures, fencing, power system, train control, and communication facilities. Chapter 2 describes operations and maintenance activities.

Impact AVQ#14: Indirect Impacts on Visual Quality from HSR Stations

As described in Section 3.13, changes in land development, including increases in intensity of uses near HSR stations, would be expected to occur concurrent with development and operations of the HSR station facilities. HSR service would increase the number of people at the stations, generating increased demand for development and commercial activity. Changes in land

development because of operations of the project alternatives would result in changes in the built environment and indirect impacts on visual quality.

The 4th and King Street Station and Millbrae Station are already regional transit hubs. The existing 4th and King Street Station in San Francisco is Caltrain's busiest station, serving an average of 15,427 passengers each weekday (Caltrain 2018b). At the Millbrae Station, 6,208 passengers use BART each weekday, and 3,340 use Caltrain (BART 2018; Caltrain 2018b). Introduction of HSR service would enhance the existing status of the stations as transit hubs.

Project features will minimize and avoid potential visual impacts through HSR station area development principles and guidelines (LU-IAMF#1, AVQ-IAMF#2). In accordance with *HST Station Area Development: General Principles and Guidelines* (Authority 2011), the Authority will encourage context-sensitive designs by working with local governments to enhance the public benefits of HSR station development to meet the needs of the local communities, including creating aesthetically pleasing buildings and streetscapes. These project features will help development around HSR stations to be compatible with each communities' existing or planned visual character but will not eliminate visual impacts from changes in the built environment.

The station modifications at the 4th and King Street Station and Millbrae Station are the same under both project alternatives. While Alternatives A and B would result in different station configurations at San Jose Diridon Station, the ridership would be the same, so the demand for development, station access, and services would be the same. For all stations, the changes in land development, including increases in intensity of uses near HSR stations, expected to occur concurrent with development and operations of the HSR station would be the same for both project alternatives. The degree of visual impacts from land development around HSR stations would depend on the HSR station setting. Development around the HSR stations, as guided by the HSR station area development principles and guidelines, would be expected to maintain the existing visual character of the communities and would not substantially reduce the visual character and visual quality.

CEQA Conclusion

The impact under CEQA would be less than significant for Alternatives A and B because *HSR Station Area Development General Principles and Guidelines* and each city's HSR station planning process would provide community-desired design standards for development around the HSR stations in San Francisco, Millbrae, and San Jose. These project features are intended to maintain or enhance the existing or planned visual character of the local communities, conforming to applicable zoning and other regulations governing scenic quality, resulting in no decrease in visual quality. Therefore, CEQA does not require mitigation.

3.15.6.3 Impacts on Scenic Highways

No Project Impacts

Ongoing development under the No Project Alternative is expected to continue in the three landscape units where I-280 and SR 82 are designated as state scenic highways. Local planning and development controls provide extensive direction to prevent new development from affecting existing visual quality. No projects are planned along either highway that would affect visual quality. Therefore, no projects would alter the visual character or quality of the designated state scenic highways, local streets, and city street network within the Mission Bay, Southeast San Francisco, or San Mateo–Redwood City Landscape Units.

Project Impacts

Impact AVQ#15: Impacts on State and Local Scenic Highways

Alternatives A and B would be visible from the 49-Mile Scenic Drive, located at grade along Cesar Chavez Street and from I-280, which travels over the Caltrain railway. I-280 would cross the railway in an industrial area between US 101 and I-280, with low visual quality and no scenic vistas or other high-quality scenic resources. I-280 runs above the railway, limiting views to the San Francisco terminal facilities at the end of the I-280 freeway. This area is described in more

detail in Impact AVQ#2. The minor track shifts near the Atherton Station would not alter views from travelers along the local scenic street network in Atherton.

CEQA Conclusion

The impact under CEQA would be less than significant for Alternatives A and B because construction of the project near state scenic highway I-280, the 49-Mile Drive, and local street network in Atherton would not substantially damage scenic resources such as trees, rock outcroppings, and historic buildings such that it would affect the visual character of the highway. The HSR infrastructure would conform to the existing visual character of the Caltrain railway, creating no conflicts with the visual character of the scenic highways. Therefore, CEQA does not require mitigation.

3.15.6.4 Impacts of Light and Glare

No Project Impacts

Planned residential, commercial, office, industrial, recreational, and transportation projects would introduce new visual elements into the landscape. While these planned developments would present new potential sources of light and glare, local and regional codes and policies include measures to limit the impacts of light and glare. Planned development would occur in existing urbanized areas. Changes in overall light levels would most likely occur when sites with existing low to moderately low nighttime light levels are redeveloped with more active nighttime uses, such as commercial or residential uses. With policies in place to limit spillover effects from new light sources, there would be no impacts from increased light and glare under the No Project Alternative.

Project Impacts

Construction Impacts

Impact AVQ#16: Temporary Direct Impacts on Nighttime Light Levels

During project construction, construction staging areas, maintenance facilities, station sites, and other HSR buildings would have temporary nighttime lighting for security and safety. Construction activities at either LMF site would increase light in the vicinity for a construction period of 2 to 3 years, reducing visual quality by one level for residential viewers above Brisbane with moderate sensitivity because of their distance from the LMF. Construction activities at both the 4th and King Street and Millbrae Stations would occur over a 2-year period in areas where existing lighting levels are moderately high. Construction of the San Jose Diridon Station would occur over a 1.5-year period for the at-grade station under Alternative A or a 4-year period for the aerial station under Alternative B, where nighttime light levels range from moderately high to high. Nighttime lighting during construction at the stations where lighting already exists would reduce visual quality. The construction of passing tracks between San Mateo and Redwood City under Alternative B would entail nighttime lighting for a duration of 4.5 years. The construction would occur parallel to El Camino Real, a major commercial thoroughfare with an existing moderately high nighttime light level. Construction of aerial structures for Alternative B in Santa Clara and San Jose would occur in areas of moderate to high nighttime lighting. As a result, lighting from construction activities would not cause a decrease in visual quality for residents with moderately high viewer sensitivity. Project features will include measures to minimize impacts on community residents and businesses, including temporary nighttime lighting (SOCIO-IAMF#1). Contractors will prepare a CMP to reduce potential impacts on neighborhoods and communities. This project feature will minimize impacts from lighting at locations where construction activities do not typically occur at night.

CEQA Conclusion

The impact under CEQA would be less than significant for Alternatives A and B because the Authority's contractors would minimize nighttime light levels through visually sensitive lighting design. Construction of the East or West Brisbane LMF would increase lighting levels for approximately 2 to 3 years, reducing visual quality by one level for residential viewers with moderate sensitivity. Modifications of the 4th and King Street and Millbrae Stations and construction of the passing track, aerial structures, and elevated station facilities in San Jose

(under Alternative B) would occur in areas where lighting levels are moderate to moderately high; therefore, construction activities in these areas would not result in a change in existing visual character or visual quality. Therefore, CEQA does not require mitigation.

Operations Impacts

Impact AVQ#17: Permanent Direct Impacts on Nighttime Light Levels at Fixed Locations

Both project alternatives would build or modify existing Caltrain station platforms at Bayshore, San Bruno, Hayward Park, Broadway, and College Park Stations. Additionally, Alternative B would modify existing Caltrain station platforms at Hillsdale and Belmont and would relocate the San Carlos Station platforms approximately 2,260 feet south of their current location. Where new platforms would be constructed at stations, new lighting would be introduced. Project features (AVQ-IAMF#1) will provide lighting and building design intended to conform to the local design context; therefore, new lighting at modified Caltrain stations will be similar to the lighting currently used at these stations. This lighting will be designed to direct light downward, minimizing light spillover to adjacent properties and maintaining existing visual quality. Visual character and quality due to train operations would be the same for Alternative A with and without the DDV because the number of trains would be the same, HSR building and facility lighting would be the same, and the difference in alignment would not result in a substantial difference in visual quality due to train movement.

HSR service would be provided at three existing Caltrain and multimodal transit facilities that are currently lit through the night. HSR operations would have little effect on nighttime light levels at these stations. At the 4th and King Street Station, any new lighting would be pedestrian oriented and directed down to avoid contributing to increased nighttime lighting levels spilling away from the street. At the Millbrae Station, expanded parking facilities west of the existing station would include project features to limit light spillover into adjacent residential areas. The same project features will limit light spillover from HSR station facilities in San Jose. Lighting levels would not result in a decrease in visual quality at any station under either alternative.

New lighting for HSR facilities under either project alternative would be concentrated in the Brisbane Landscape Unit, where an LMF would be located. Lighting from either the West or East Brisbane LMF would be visible from residential areas above Brisbane. The maintenance building and other facilities would be lit through the night, contributing to increases in nighttime light levels. Project features will provide lighting and building design intended to conform to the local design context (AVQ-IAMF#1).

The LMF would operate 24 hours per day. All artificial outdoor lighting would be limited to meeting safety and security requirements and would be designed using Illuminating Engineering Society's design guidelines and in compliance with International Dark Sky Association-approved fixtures. All lighting would be designed to have minimum impacts on the surrounding environment and would use downcast, cut-off type fixtures that direct the light only towards objects requiring illumination. Lighting fixtures would be installed at the lowest allowable height and positioned to cast low-angle illumination while minimizing incidental light spill onto adjacent properties, open spaces, or backscatter into the nighttime sky. The lowest allowable illumination level would be used for all lighted areas and the amount of nighttime lights needed to light an area would be minimized to the highest degree possible. Lights would provide color rendering with natural light qualities and the minimum intensity feasible for security, safety, and personnel access.

Because technologies to reduce light pollution evolve over time, the design measures that are currently available may help reduce light pollution but may not be the most effective means once the project is in final design. Therefore, all design measures used to reduce light pollution will employ the most effective technologies available at the time of final design to allow the highest potential reduction in light pollution.

While lighting would be introduced to a location that is currently undeveloped and therefore unlit, the lighting design would limit its radiance. When viewed by residential viewers with moderate viewer sensitivity located 1 mile from either LMF site, the light from the Brisbane LMF would be

visible, but would be consistent with the larger context that includes other existing nighttime sources, such as traffic on US 101 and the southern-facing skyline of San Francisco.

CEQA Conclusion

The impact under CEQA would be less than significant for Alternatives A and B because HSR facilities would not create new sources of substantial light that would adversely affect nighttime views. The project would minimize and avoid impacts through visually sensitive lighting design, avoiding potential impacts on the visual environment and visual quality. Therefore, CEQA does not require mitigation.

Impact AVQ#18: Permanent Direct Impacts on Nighttime Light Levels from Trains

Project operations would increase the number of trains operating within the corridor, and HSR trains at night would contribute a regular and repeating source of light similar to what viewers experience under existing conditions from Caltrain trains. Train lights would be directed toward the guideway to minimize spillover. Nighttime maintenance activities along the alignment would include lighting in fixed locations or light emanating from slow-moving maintenance vehicles, as is the case with existing Caltrain operations.

Throughout the RSA, commercial and retail developments and auto-oriented roadways, such as El Camino Real, are well lit at night, contributing to a moderate nighttime light level. Residential neighborhoods without dense flora also generally radiate moderate nighttime light. Exceptions are six landscape units—Mission Bay, Brisbane, Atherton–Mountain View, Santa Clara, Diridon Station, and San Jose Station Approach. The Mission Bay, Santa Clara, and Diridon Station Landscape Units have a moderately high nighttime light level due to density of development and corresponding level of traffic and pedestrian activity. The Brisbane Landscape Unit is the least densely developed, leading to a moderately low nighttime light level, but with some viewers experiencing a moderate light level from distant views of the San Francisco skyline. The Atherton–Mountain View Landscape Unit also has moderately low nighttime light levels because of the dense flora in many residential areas. Light levels vary in the San Jose Station Approach Landscape Unit, from moderately high along the I-280 and SR 87 freeways to moderately low in the portions of residential areas with dense flora.

Nighttime light from HSR trains would not contribute to increased light levels in any landscape unit because, in areas of moderate to moderately high light, the HSR lights would not stand out. In areas with moderately low nighttime light, sensitive residential viewers would have limited exposure to the light. The exposure would be limited by distance, as in the Brisbane Landscape Unit, where residential areas are far from the railway, or by flora and buildings, as in the Atherton–Mountain View Landscape Unit. There would be no effect on nighttime light levels from trains under Alternative A or B. Compared to Alternative A without the DDV, Alternative A with the DDV would have the same visual aesthetics due to train operations because the number of trains would be the same, HSR building and facility lighting would be the same, and the difference in alignment would not result in a substantial change in visual quality due to train movement.

CEQA Conclusion

The impact under CEQA would be less than significant for Alternatives A and B because in landscape units with moderate nighttime light, the light from HSR trains would not increase nighttime light levels. Where nighttime light levels are low, sensitive viewers would have limited exposure due to distance from the light source or flora or building siting that blocks light from the trains. Residents with moderately high viewer sensitivity would not experience a change in existing visual character or visual quality. Therefore, CEQA does not require mitigation.

3.15.7 Mitigation Measures

The following mitigation measures would be implemented to address impacts on aesthetics and visual quality, including scenic vistas. The project would have no significant impacts under CEQA on scenic highways, nor would there be significant impacts under CEQA associated with light and glare. Therefore, no mitigation is required for those specific topics.

AVQ-MM#1: Minimize Visual Disruption from Construction Activities

Prior to construction (any ground-disturbing activity) the contractor will prepare a technical memorandum, for the Authority's review and approval, identifying how the project will minimize construction-related visual/aesthetic disruption and include the following activities:

- Minimize pre-construction clearing to that necessary for construction.
- Limit the removal of buildings to those that would conflict with project components.
- When possible, preserve existing vegetation, particularly vegetation along the edge of construction areas that may help screen views.
- After construction, regrade areas disturbed by construction, staging, and storage to original contours and revegetate with plant material similar in numbers and types to that that was removed, based upon local jurisdictional requirements. If no local jurisdictional requirements exist, replace removed vegetation at a 1:1 replacement ratio for shrubs and small trees, and a 2:1 replacement ratio for mature trees. For example, if the contractor removes 10 mature trees in an area, replant 20 younger trees that within 5 to 15 years (depending upon the growth rates of the trees) will be of a height and spread to provide visual screening similar to the visual screening provided by the trees that were removed for construction. Replaced shrubs will be a minimum 5 gallon and replaced trees will be a minimum 24-inch box and minimum 8 feet in height.
- To the extent feasible, do not locate construction staging sites within the immediate foreground distance (0 to 500 feet) of existing residential neighborhoods, recreational areas, or other land uses that include highly sensitivity viewers. Where such siting is unavoidable, screen staging sites from viewers using appropriate solid screening materials such as temporary fencing and walls. Paint over or remove any graffiti or visual defacement of temporary fencing and walls within 5 business days of it occurring.

This mitigation measure will be effective in minimizing the aesthetic and visual impacts of construction activities because it will reduce the resulting area, scale, and exposure to adverse visual impacts.

No secondary impacts would result from this mitigation measure. These measures are typical of aesthetic treatments applied on linear transportation facilities; they have been defined to be specific in range and implementable according to context. Implementation of these construction-related actions are not expected to result in additional visual impacts because the measures would enhance visual quality where possible and alleviate impacts associated with temporary visual changes introduced by the HSR project.

AVQ-MM#2: Minimize Light Disturbance during Construction

Prior to construction (any ground-disturbing activity requiring nighttime construction) the contractor will prepare a technical memorandum verifying how the contractor will shield nighttime construction lighting and direct it downward in such a manner to minimize the light that falls outside the construction site boundaries.

The technical memorandum will be submitted to the Authority for review and approval.

This mitigation measure will be effective in minimizing the aesthetic and visual impacts of nighttime construction light spillover because the light sources will no longer be visible off-site to nearby viewer groups.

This mitigation measure would not result in secondary impacts because it would not change the scope, scale, or location of construction activities beyond those that have been described as part of the project.

AVQ-MM#3: Incorporate Design Aesthetic Preferences into Final Design and Construction of Non-Station Structures

Prior to construction (any ground-disturbing activity) the contractor will work with the Authority and local jurisdictions to incorporate the Authority-approved aesthetic preferences for non-station structures into final design and construction (refer to Authority 2014). A technical memorandum will be submitted to the Authority to document compliance.

This mitigation measure will be effective in minimizing the aesthetic and visual impacts of HSR infrastructure because a context-sensitive design process and resulting design elements will enhance the visual landscape, integrating the appearance of the HSR infrastructure into that of the surrounding community, and reducing adverse visual impacts.

This measure would not trigger secondary environmental impacts because it would not change the scope, scale, or location of construction activities beyond those that have been described as part of the project.

AVQ-MM#4: Provide Vegetation Screening along At-Grade and Elevated Guideways Adjacent to Residential Areas

Prior to operation and maintenance of HSR, the contractor will plant trees (minimum 24-inch box and 8 feet in height) along the edges of the HSR rights-of-way in locations adjacent to residential areas to visually screen the elevated guideway and the residential area. The species of trees to be installed will be selected based on their mature size and shape, growth rate, hardiness, and drought tolerance. No species on the Invasive Species Council of California's list will be planted. Upon maturity, the crowns of trees used will be tall enough to partially or fully screen views of the elevated guideway from adjacent at-grade areas. Upon maturity, trees will allow ground-level views under the crowns (with pruning if necessary) and will not interfere with the 15-foot horizontal clearance requirement for the guideway. The trees will be maintained. Irrigation systems will be installed within the tree planting areas.

The contractor will prepare a technical memorandum within 90 days of completing any construction section or segment documenting the species of trees that were incorporated into the edges of the HSR right-of-way adjacent to residential uses. The technical memorandum will be submitted to the Authority to document compliance.

This mitigation measure will be effective in minimizing the aesthetic and visual impacts of HSR infrastructure because it will reduce the adverse visual impact on sensitive viewers resulting from the contrast between existing views and views of HSR infrastructure. The planting of trees and other vegetation to provide visual relief to sensitive viewers from HSR facilities will introduce new visual features, such as hedgerows, that will block distant views. This mitigation measure is typical of visual treatments applied to similar infrastructure facilities and will be designed in coordination with local jurisdictions.

Impacts from this mitigation would be blocked views where screening is placed in locations where views were previously available to residents and other sensitive viewers. The screening would provide viewers with views toward trees and other flora that would mask the HSR infrastructure, reducing the contrast and impact on sensitive viewers.

AVQ-MM#5: Replant Unused Portions of Lands Acquired for the HSR

Prior to operations and maintenance, the contractor will plant vegetation within land acquired for the project (e.g., shifting roadways) that are not used for the HSR or related supporting infrastructure, or other higher or better use. Plantings will allow adequate space between the vegetation and the HSR alignment and catenary lines. All street trees and other visually important vegetation removed in these areas during construction will be replaced with similar vegetation that, upon maturity, will be similar in size and character to the removed vegetation. Replaced shrubs will be minimum 5 gallon and trees will be minimum 24-inch box and 8 feet in height. The Authority will provide for continuous maintenance with appropriate irrigation systems. The contractor will install the irrigation system within the planting areas. No species listed on the Invasive Species Council of California's list of invasive species will be planted.

This mitigation measure will be effective in minimizing the aesthetic and visual impacts of land made fallow because it will replace vegetation removed during construction and enhance the visual appeal of areas in proximity to HSR infrastructure, thereby reducing the resulting area, scale, and exposure to adverse visual impacts.

This measure is not anticipated to trigger secondary environmental impacts because new vegetation would primarily be replacing old vegetation and would not adversely affect visual quality or other resources.

AVQ-MM#6: Provide Noise Barrier Treatment

Prior to construction (any ground-disturbing activity), the contractor will design a range of noise barrier treatments for visually sensitive areas, such as those areas where residential views of open landscaped areas would change or in urban areas where noise barriers would adversely affect the existing character and setting. The contractor will develop the treatments during the final design process and integrate them into the final project design. The treatments will include, but are not limited to, the following:

- Noise barriers along elevated guideways that may incorporate transparent materials where sensitive views would be adversely affected by opaque noise barriers
- Noise barriers made with nonreflective materials and of a neutral color
- Surface design enhancements and vegetation appropriate to the visual context of the area will be installed with the noise barriers. Vegetation will be installed consistent with the provisions of AVQ-MM#5. Surface enhancements will be consistent with the design features developed for AVQ-MM#3 and will include architectural elements (e.g., stamped pattern, surface articulation, decorative texture treatment), as determined acceptable to the local jurisdiction. Surface coatings will be used on wood and concrete noise barriers to facilitate cleaning and the removal of graffiti.

The contractor will prepare a technical memorandum documenting implementation and submit it to the Authority to demonstrate compliance.

3.15.8 Impact Summary for NEPA Comparison of Alternatives

As described in Section 3.1.5.4, when evaluating impacts on resources under NEPA, project alternatives are compared to the baseline condition. The determination of impact is based on the context and intensity of the change from project construction and operation. Table 3.15-25 shows a comparison of the potential impacts of the project alternatives, summarizing the detailed information provided in Section 3.15.6.

Table 3.15-25 Comparison of Project Alternative Impacts for Aesthetics and Visual Quality

Impacts	Alternative A	Alternative B
Visual Quality		
Impact AVQ#1: Temporary Direct Impacts on Visual Quality and Scenic Vistas	Construction activities would temporarily degrade visual quality where HSR construction occurs outside the existing Caltrain right-of-way. Project features minimize impacts where sensitive viewers are found.	Same as Alternative A, except in the San Mateo–Redwood City Landscape Unit, where a greater level of construction activity would be required for construction of the passing track, and the Santa Clara, Diridon Station, and San Jose Station Approach Landscape Units, where aerial structures would be built under Alternative B.
Impact AVQ#2: Permanent Direct Impacts on Visual Quality—Mission Bay Landscape Unit	Track shifts, station modifications, and other modifications in and adjacent to existing railway facilities would conform to the existing character of the area and would not change the existing visual quality.	Same as Alternative A
Impact AVQ#3: Permanent Direct Impacts on Visual Quality—Southeast San Francisco Landscape Unit	Track shifts and other modifications within and adjacent to existing railway facilities would conform to the existing character of the area and would not change the existing visual quality.	Same as Alternative A
Impact AVQ#4: Permanent Direct Impacts on Visual Quality—Brisbane Landscape Unit	Track shifts and other modifications within and adjacent to existing railway facilities would conform to the existing character of the area. Although the East Brisbane LMF would decrease the visual quality for residential viewers on San Bruno Mountain, there would be no change in the visual quality for the landscape unit as a whole.	Similar to Alternative A. Although the West Brisbane LMF would decrease the visual quality for residential viewers on San Bruno Mountain, there would be no change in the visual quality for the landscape unit as a whole.
Impact AVQ#5: Permanent Direct Impacts on Visual Quality—South San Francisco Landscape Unit	Track shifts and radio tower installation would conform to the existing character of the area and would not change the existing visual quality.	Same as Alternative A
Impact AVQ#6: Permanent Direct Impacts on Visual Quality—San Bruno–Millbrae Landscape Unit	Track shifts and other modifications within and adjacent to existing railway facilities would conform to the existing character of the area. Although the expansion of tracks and station facilities at the Millbrae Station would decrease visual quality for travelers along El Camino Real and travelers or residential viewers along California Drive, there would be no change in the visual quality for the landscape unit as a whole.	Same as Alternative A

Impacts	Alternative A	Alternative B
Impact AVQ#7: Permanent Direct Impacts on Visual Quality—Burlingame Landscape Unit	Track shifts, reconstruction of Broadway Caltrain Station platforms, and radio tower installation would conform to the existing character of the area and would not change the existing visual quality.	Same as Alternative A
Impact AVQ#8: Permanent Direct Impacts on Visual Quality—San Mateo–Redwood City Landscape Unit	Track shifts, new radio towers, and other alterations to the existing railway infrastructure would conform to the existing character of the area and would not change the existing visual quality.	Expansion of the railway from two to four tracks would affect visual quality at specific locations where the expanded railway would intrude on adjacent land uses and contrast with the residential character of the area or the historic San Carlos Depot building. Outside these locations, track shifts and other modifications within and adjacent to existing railway facilities would conform to the existing character of the area, such that the visual quality would not change.
Impact AVQ#9: Permanent Direct Impacts on Visual Quality—Atherton–Mountain View Landscape Unit	Track shifts and radio tower installation would conform to the existing character of the area and would not change the existing visual quality.	Same as Alternative A
Impact AVQ#10: Permanent Direct Impacts on Visual Quality—Sunnyvale Landscape Unit	Track shifts and radio tower installation would conform to the existing character of the area and would not change the existing visual quality.	Same as Alternative A
Impact AVQ#11: Permanent Direct Impacts on Visual Quality—Santa Clara Landscape Unit	The alignment would be at grade, and the additional rail infrastructure would be within and adjacent to existing railway facilities such that the visual quality would not change.	Alternative B (Viaduct to I-880): Same as Alternative A Alternative B (Viaduct to Scott Boulevard): Construction of an elevated viaduct and other structures would change the baseline visual character and block or change locally important views for residents, such that the visual quality of the landscape unit would be reduced from moderately high to moderate.
Impact AVQ#12: Permanent Direct Impacts on Visual Quality—Diridon Station Landscape Unit	Track shifts and platform modifications to allow for HSR service to be blended with Caltrain service would not change the visual quality of the landscape unit.	HSR infrastructure, including aerial structures rising up to 60 feet, would introduce permanent changes into the visual character of the landscape unit, reducing visual quality from moderate to moderately low, predominantly affecting travelers and commercial viewer groups (moderate sensitivity).

Impacts	Alternative A	Alternative B
Impact AVQ#13: Permanent Direct Impacts on Visual Quality—San Jose Station Approach Landscape Unit	Track shifts and reconstruction or modification of existing grade separations to allow addition of a third track to permit HSR service to be blended with Caltrain service would not change the visual quality of the landscape unit.	HSR infrastructure, including a viaduct rising up to 60 feet, would introduce permanent changes into the existing visual character of the landscape unit (moderately high visual quality) which includes the Gardner neighborhood (moderately high sensitivity), by adding a view of transportation infrastructure, such that the existing visual quality of the landscape unit would be degraded.
Impact AVQ#14: Indirect Impacts on Visual Quality from HSR Stations	Land use development around HSR stations in San Francisco, Millbrae, and San Jose would be expected to maintain the existing visual character of the community through sound design principles in the Authority's "zone of responsibility" around each station, resulting in no impact on visual quality.	Same as Alternative A
State Scenic Highways		
Impact AVQ#15: Impacts on State and Local Scenic Highways	Construction near state scenic highway I-280, the 49-Mile Drive, and local street network in Atherton would have no impact on visual quality from state and local scenic roadways.	Same as Alternative A
Light and Glare		
Impact AVQ#16: Temporary Direct Impacts on Nighttime Light Levels	Construction-related nighttime light would be minimized through visually sensitive lighting design.	Similar to Alternative A except in the San Mateo–Redwood City Landscape Unit, where addition of passing tracks would require temporary lighting at more locations under Alternative B.
Impact AVQ#17: Permanent Direct Impacts on Nighttime Light Levels at Fixed Locations	Alternative A would introduce new lighting at the Brisbane LMF, which would be visible from the residential areas on San Bruno Mountain. The new light from the Brisbane LMF would be less bright than other existing sources, such as traffic on US 101 or the skyline of southern San Francisco. Lighting from other fixed HSR facilities would be similar to light from existing Caltrain facilities.	Similar to Alternative A, except in the San Mateo–Redwood City Landscape Unit, where expanded, modified, and relocated Caltrain stations would result in station platform lighting at different locations, but similar to existing light levels.
Impact AVQ#18: Permanent Direct Impacts on Nighttime Light Levels from Trains	Light levels from operation of HSR trains would be similar to existing light from Caltrain and freight train operations.	Same as Alternative A

Authority = California High-Speed Rail Authority
HSR = high-speed rail
I- = Interstate
LMF = light maintenance facility

US = U.S. Highway

Construction of either Alternative A or B would cause temporary construction impacts on visual character and quality from introducing construction activities and equipment, worker parking, and equipment and materials storage areas into the viewsheds of all viewer groups. Impacts would be greater where there are sensitive viewers or where larger portions of the project alternative would be visible. Construction may be visible from some locations with scenic vistas, such as from elevated roadways and bridges that cross or parallel the existing rail corridor or from adjacent multilevel buildings or hillside locations, degrading visual quality where sensitive viewers are present. The temporary construction impacts would be greater under Alternative B in the San Mateo–Redwood City Landscape Unit because of the expansion of the railway from two to four tracks to add passing tracks. This work would entail rebuilding existing rail bridges over existing grade-separated streets and importing fill and materials to widen existing berms and expand the Hillsdale Caltrain Station, rebuild the Hayward Park and Belmont Caltrain Stations, and relocate the station platforms of the San Carlos Caltrain Station. Impacts would also be greater under Alternative B in the Santa Clara, Diridon, and San Jose Station Approach Landscape Units where aerial structures are planned. Mitigation measures including visual screening of storage and staging areas and siting them away from sensitive viewers; shielded lighting; and revegetation of disturbed areas will reduce temporary construction impacts on visual quality. Nonetheless, views of construction equipment and materials from nearby viewers would remain.

Construction of the project alternatives would cause direct permanent impacts on visual character and quality resulting from physical changes of the landscape that change the existing visual character, or that block, screen, obstruct, or interfere with views of scenic resources and important visual landmarks, resulting in degraded visual quality. Permanent impacts on aesthetics and visual quality would be minimal for most of the Project Section. The minor alterations to the 4th and King Street Station in San Francisco, the minor shifts to tracks along the corridor, addition of four-quadrant gates at at-grade crossings, and radio towers would be familiar to existing viewers of the Caltrain railway. Alternatives A and B would affect visual quality in the vicinity of the Brisbane LMF sites (KVP 4), with Alternative B having a greater effect due to the removal of a large portion of Icehouse Hill. Both project alternatives would also affect visual quality near the historic Millbrae Depot building (KVP 6). In addition, Alternative B would affect visual quality at locations where the passing tracks would intrude visually on residential areas (KVP 7) and the historic San Carlos Depot building (KVP 9) and would add aerial structures out of scale with the surrounding landscape at West Santa Clara Street (KVP 18). Project features will provide aesthetic guidelines and an aesthetic review process for an enhanced design for the HSR structures, so they will complement the context of each community's visual character, minimizing the intensity of any impact on visual quality.

Construction of the project alternatives would not cause indirect permanent construction impacts on visual quality and character because the 4th and King Street Station, the Millbrae Station, and Diridon San Jose Station are established transportation hubs. The project would intensify their use but would not change the existing context of each site. Project features will provide development around HSR stations intended to be compatible with each community's existing or planned visual character. Lighting and building design will conform to the local design context.

Station area development principles would help to maximize the performance of the transportation investment, enhance the livability of the communities the station serves, create long-term value, and sensitively integrate the project into the communities along the Project Section. In accordance with *HSR Station Area Development General Principles and Guidelines*, the Authority would encourage context-sensitive designs by working with local governments to enhance the public benefits of HSR station development so they meet the needs of the local communities.

Operations effects would be common to both project alternatives. Light levels from HSR trains would be similar to existing light from Caltrain and freight train operations. Fixed location lighting at HSR stations would be designed to limit spillover to adjacent properties. Lighting from either LMF would be visible from residential areas on San Bruno Mountain. Various HSR buildings and facilities would be lit throughout the night, contributing to increases in nighttime light levels. The

project features will provide lighting directed downward and minimize light spillover. Light from the LMF would be visible from residences above Brisbane, but it would be consistent with the larger context that includes other existing sources, such as traffic on US 101 and the skyline of southern San Francisco.

3.15.9 CEQA Significance Conclusions

As described in Section 3.1.5.4, the impacts of project actions under CEQA are evaluated against thresholds to determine whether a project action would result in no impact, a less-than-significant impact, or a significant impact. Table 3.15-26 identifies the CEQA significance conclusions for each impact described in Section 3.15.6. A summary of the significant impacts, mitigation measures, and factors supporting the significance conclusions after mitigation follows the table.

Table 3.15-26 CEQA Significance Conclusions and Mitigation Measures for Aesthetics and Visual Quality

CEQA Impact	Impact Description and CEQA Level of Significance before Mitigation	Mitigation Measure(s)	CEQA Level of Significance After Mitigation
Visual Quality, Including Scenic Vistas			
Impact AVQ#1: Temporary Direct Impacts on Visual Quality and Scenic Vistas	Less than significant for Alternative A: Station and LMF construction, track shifts and other modifications within and adjacent to existing railway facilities would not substantially degrade the existing visual quality.	No mitigation measures are required	Less than Significant
	Significant for Alternative B: Construction activities and equipment to build passing tracks and aerial structures would substantially degrade the existing visual character or quality of multiple sites and their surroundings where there are highly sensitive viewers.	AVQ-MM#1: Minimize Visual Disruption from Construction Activities AVQ-MM#2: Minimize Light Disturbance during Construction	Less than Significant
Impact AVQ#2: Permanent Direct Impacts on Visual Quality—Mission Bay Landscape Unit	Less than significant for both alternatives: Track shifts, station modifications, and other modifications in and adjacent to existing railway facilities would not substantially degrade the existing visual quality of the Mission Bay Landscape Unit.	No mitigation measures are required	N/A
Impact AVQ#3: Permanent Direct Impacts on Visual Quality—Southeast San Francisco Landscape Unit	Less than significant for both alternatives: Track shifts and other modifications within and adjacent to existing railway facilities would not substantially degrade the existing visual quality of the Southeast San Francisco Landscape Unit.	No mitigation measures are required	N/A

CEQA Impact	Impact Description and CEQA Level of Significance before Mitigation	Mitigation Measure(s)	CEQA Level of Significance After Mitigation
Impact AVQ#4: Visual Permanent Direct Impacts on Visual Quality—Brisbane Landscape Unit	Less than significant for both alternatives: Although the East or West Brisbane LMF would decrease the visual quality by one level (from moderately high to moderate) for residential viewers with moderate sensitivity on San Bruno Mountain, neither alternative would substantially degrade the existing visual character or quality of the site and its surroundings of the landscape unity as a whole.	No mitigation measures are required	N/A
Impact AVQ#5: Permanent Direct Impacts on Visual Quality—South San Francisco Landscape Unit	Less than significant for both alternatives: Track shifts and other modifications within and adjacent to existing railway facilities would not substantially degrade the existing visual quality of the South San Francisco Landscape Unit.	No mitigation measures are required	N/A
Impact AVQ#6: Permanent Direct Impacts on Visual Quality—San Bruno–Millbrae Landscape Unit	Less than significant for both alternatives: Although the expansion of tracks and station facilities at the Millbrae Station would decrease the visual quality by one level (from moderate to moderately low) for travelers along El Camino Real and would decrease the visual quality by one level (from moderately low to low) for residential viewers along California Drive, it would not substantially degrade the existing visual character or quality in the San Bruno–Millbrae Landscape Unit for most viewers.	No mitigation measures are required	N/A
Impact AVQ#7: Permanent Direct Impacts on Visual Quality—Burlingame Landscape Unit	Less than significant for both alternatives: Track shifts, reconstruction of Broadway Caltrain Station platforms, and radio tower installation would not substantially degrade existing visual quality in the Burlingame Landscape Unit.	No mitigation measures are required	N/A

CEQA Impact	Impact Description and CEQA Level of Significance before Mitigation	Mitigation Measure(s)	CEQA Level of Significance After Mitigation
Impact AVQ#8: Permanent Direct Impacts on Visual Quality—San Mateo–Redwood City Landscape Unit	Less than significant for Alternative A: The track shifts, new radio towers, and other alterations to the existing railway infrastructure would not substantially degrade existing visual quality in the San Mateo–Redwood City Landscape Unit.	No mitigation measures are required	N/A
	Significant for Alternative B: Construction of the passing track and the associated expansion of the right-of-way would substantially degrade the existing visual character or quality of a residential area in San Mateo and at the historic San Carlos Depot building and their surroundings.	AVQ-MM#3: Incorporate Design Aesthetic Preferences into Final Design and Construction of Non-Station Structures AVQ-MM#4: Provide Vegetation Screening along At-Grade and Elevated Guideways Adjacent to Residential Areas AVQ-MM#5: Replant Unused Portions of Lands Acquired for the HSR	Less than Significant
Impact AVQ#9: Permanent Direct Impacts on Visual Quality—Atherton–Mountain View Landscape Unit	Less than significant for both alternatives: Track shifts and other modifications within and adjacent to existing railway facilities would not change the existing visual quality of the Atherton–Mountain View Landscape Unit.	No mitigation measures are required	N/A
Impact AVQ#10: Permanent Direct Impacts on Visual Quality—Sunnyvale Landscape Unit	Less than significant for both alternatives: Track shifts and other modifications within and adjacent to existing railway facilities would result in no change to the existing visual quality of the Sunnyvale Landscape Unit.	No mitigation measures are required	N/A
Impact AVQ#11: Permanent Direct Impacts on Visual Quality—Santa Clara Landscape Unit	Less than significant for Alternative A and Alternative B (Viaduct to I-880): The HSR infrastructure would be located within and adjacent to baseline railway facilities, resulting in no change to the baseline visual quality of the landscape unit.	No mitigation measures are required	N/A

CEQA Impact	Impact Description and CEQA Level of Significance before Mitigation	Mitigation Measure(s)	CEQA Level of Significance After Mitigation
	Less than significant for Alternative B (Viaduct to Scott Boulevard): The decrease in visual quality from moderately high to moderate would not affect most viewers with moderately low sensitivity.	No mitigation measures are required	N/A
Impact AVQ#12: Permanent Direct Impacts on Visual Quality—Diridon Landscape Unit	Less than significant for Alternative A: Minor track shifts and modifications to station platforms would not change the visual quality of the landscape unit.	No mitigation measures are required	N/A
	Less than significant for Alternative B: Construction of a viaduct for HSR would decrease the baseline visual quality of the Diridon Station Landscape Unit from moderate to moderately low. Viewers with moderate sensitivity would not experience an impact on visual quality.	No mitigation measures are required	N/A
Impact AVQ#13: Permanent Direct Impacts on Visual Quality—San Jose Station Approach Landscape Unit	Less than significant for Alternative A: There would be no change in visual quality.	No mitigation measures are required	N/A
	Less than significant for Alternative B: The decrease in visual quality from moderately high to moderate would be viewed mainly by travelers with moderate sensitivity and construction of a viaduct for HSR would not substantially degrade existing visual quality.	No mitigation measures are required	N/A
Impact AVQ#14: Indirect Impacts on Visual Quality from HSR Stations	Less than significant for both alternatives: The project features provide high design standards for development around the HSR stations in San Francisco and Millbrae that will conform to applicable zoning and other regulations governing scenic quality, maintaining the existing or planned visual character of the local communities.	No mitigation measures are required	N/A

CEQA Impact	Impact Description and CEQA Level of Significance before Mitigation	Mitigation Measure(s)	CEQA Level of Significance After Mitigation
State Scenic Highways			
Impact AVQ#15: Impacts on State Scenic Highways	Less than significant for both alternatives: The project would not substantially damage scenic resources such that it affects the visual character of the highway. The HSR infrastructure would create no conflicts with the visual character of the scenic highways.	No mitigation measures are required	N/A
Light and Glare			
Impact AVQ#16: Temporary Direct Impacts on Nighttime Light Levels	Less than significant for both alternatives: Project features will minimize construction impacts through visually sensitive lighting design.	No mitigation measures are required	N/A
Impact AVQ#17: Permanent Direct Impacts on Nighttime Light Levels at Fixed Locations	Less than significant for both alternatives: HSR facilities would not create new sources of substantial light that would adversely affect nighttime views.	No mitigation measures are required	N/A
Impact AVQ#18: Permanent Direct Impacts on Nighttime Light Levels from Trains	Less than significant for both alternatives: Where existing light levels are moderate, trains would not increase light levels. Where light levels are moderately low, exposure of sensitive viewers would be limited by distance or blocked by flora or building siting.	No mitigation measures are required	N/A

HSR = high-speed rail
LMF = light maintenance facility
N/A = not applicable

Impact AVQ#1: Temporary Direct Impacts on Visual Quality and Scenic Vistas

During construction, Alternative B would have a temporary significant impact because construction activities and equipment would substantially degrade the existing visual quality of multiple sites and their surroundings. Construction equipment, stockpiles, and activities would contrast with the established character of views in highly sensitive residential areas and would alter the existing visual quality of residential areas and historic properties, reducing their cultural order to affect visual quality. While the project would reduce dust, screen and site activities away from sensitive viewers, and restore temporary construction sites to their pre-construction condition, large-scale activities such as construction of the passing track under Alternative B could not be screened, substantially degrading visual resources. Where construction would degrade the views of highly sensitive residential and recreational viewers, visual resources would be substantially degraded by causing a decline in both the cultural order and natural harmony, decreasing visual quality. Project features will minimize these potential impacts on the visual environment and visual quality, but not to a less-than-significant level.

The Authority would implement mitigation measures to minimize the area, scale, and exposure of visual impacts on residential views. AVQ-MM#1 and AVQ-MM#2 will require construction

contractors to preserve existing vegetation to screen views, locate construction staging sites 500 feet from residential areas, and shield nighttime construction lighting, thereby minimizing changes to the existing visual quality. Therefore, with mitigation measures the impact would be less than significant.

Impact AVQ#8: Permanent Direct Impacts on Visual Quality—San Mateo–Redwood City Landscape Unit

Alternative B would have a significant impact under CEQA because the expansion of railway infrastructure would substantially degrade the visual environment and visual quality of the residential area at KVP 7 and the historic San Carlos Depot building at KVP 9 and its surroundings by reducing visual quality two levels (from moderately high to moderately low) at KVP 7 for residents with high viewer sensitivity, and one level (from moderately high to moderate) at KVP 9 for retail and traveling viewers with moderately high viewer sensitivity. In these locations, the expanded railway would intrude on adjacent land uses and contrast with the residential character of the area or the historic San Carlos Depot building. The project includes aesthetic guidelines to integrate structures within a community and to reduce intrusiveness of HSR infrastructure; conformance with these guidelines would minimize but not eliminate impacts of the visual encroachment of HSR.

The Authority would implement mitigation measures to reduce impacts on sensitive viewers. AVQ-MM#3 will require the contractor to work with the Authority and local jurisdictions to incorporate Authority-approved aesthetic preferences for non-station structures into final design and construction. As part of AVQ-MM#4, the Authority or its contractors, prior to the commencement of HSR operations, will provide landscape screening to obscure HSR infrastructure from residential and recreational viewers. As part of AVQ-MM#5, lands acquired for the project that are not used for the HSR will be replanted or replaced with similar vegetation that, upon maturity, will be similar in size and character to the removed vegetation. This measure will minimize the aesthetic and visual impacts of land made fallow because it will replace vegetation removed during construction and enhance the visual appeal of areas in proximity to HSR infrastructure, thereby reducing the resulting area and scale of and the exposure to adverse visual impacts.

These mitigation measures will be effective in reducing the aesthetic and visual impacts of HSR infrastructure because a context-sensitive design process and resulting design elements will enhance the visual landscape, integrating the appearance of the HSR infrastructure into that of the surrounding community, and reducing adverse visual impacts. These mitigation measures will soften and obscure the conflicting aesthetic of the HSR infrastructure, thereby reducing the resulting area and scale of and the exposure to adverse visual impacts.