

3.13 Station Planning, Land Use, and Development

3.13.1 Introduction

This section describes the existing and planned land use patterns, character, and intensity in the San Francisco to San Jose Project Section (Project Section, or project) resource study area (RSA). It considers short- and long-term conflicts with adjacent land uses, the potential alteration of land use patterns in the RSA through direct conversion of land uses or introduction of incompatible uses, and inducement of substantial population growth beyond planned levels. Critical land use issues in the RSA include the lack of land available for development, the limited right-of-way in which to implement track modifications, the proximity of sensitive land uses (e.g., residential, parks, schools, hospitals) to the project, and potential conflict with plans for transit-oriented development (TOD) in Brisbane. In the land use RSA, the areas near the proposed Brisbane light maintenance facility (LMF), high-speed rail (HSR) station in Millbrae, and passing tracks would undergo the greatest long-term change to existing land uses because land uses in these areas would be permanently converted to transportation-related uses. Short-term land use changes, such as the temporary use of areas for storage of construction equipment and materials, or temporary road closures, would occur at the stations, the Brisbane LMF, and along the rail alignment.

What is Transit-Oriented Development?

Transit-oriented development is a pattern of dense, diverse, pedestrian-friendly land uses located near transit nodes that, under the right conditions, translates into higher transit patronage (Transit Cooperative Research Program 2004).

HSR stations can become a focal point of economic activity, as public and private investment seeks to capture the travel benefits of increased intercity accessibility. Planned development in the areas surrounding the 4th and King Street Station in downtown San Francisco, Millbrae Station, and San Jose Diridon Station would expand the residential and employment markets with direct access to a major transit hub. HSR service at these stations would attract a new market of intercity travelers and increase statewide accessibility to jobs, goods, and services.¹ HSR station improvements would create new passenger throughput capacity, increase capacity for future travel demand, and expand travel capacity for future residential and employment growth.

The following appendices in Volume 2, Technical Appendices, of this Draft Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) provide additional details on station planning, land use, and development:

- Appendix 2-D, Applicable Design Standards, describes the relevant design standards for this Project Section.
- Appendix 2-E, Project Impact Avoidance and Minimization Features, provides the list of all impact avoidance and minimization features (IAMF) incorporated into this 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 by resource of project inconsistencies and reconciliations with regional and local plans and policies.
- Appendix 3.1-B, San Francisco Bay Conservation and Development Commission Bay Plan Consistency Analysis, provides a summary of the project's consistency with San Francisco Bay Plan (Bay Plan) policies.
- Appendix 3.13-A, General Plan Land Use Maps, provides maps showing general plan land use designations in the RSA for all project subsections.

¹ The 4th and King Street Station would serve as an interim station until completion of the proposed Downtown Extension Project (DTX). The DTX would extend the electrified peninsula rail corridor in San Francisco from the 4th and King Street Station north to the Salesforce Transit Center (SFTC). HSR would use the track built for the DTX to reach the SFTC.

As a resource topic, station planning, land use, and development (including land use patterns, conversion of lands, and compatibility of adjacent land uses) encompasses a range of factors that contribute to an area's land use character. Local air quality, noise levels, community facilities, and aesthetics, for example, all shape and influence an area's character and can affect how well different land uses function. The following 10 EIR/EIS resource sections or chapters provide additional information related to station planning, land use, and development:

- Section 3.2, Transportation, evaluates changes in circulation and access resulting from construction and operation of the project.
- Section 3.3, Air Quality and Greenhouse Gases, evaluates the project's contribution to air quality and greenhouse gas (GHG) emissions resulting from construction and operation.
- Section 3.4, Noise and Vibration, evaluates the project's contribution to temporary and permanent increased ambient noise levels and vibration.
- Section 3.7, Biological and Aquatic Resources, evaluates project-related impacts on habitat for special-status species, wildlife, special-status plant communities, aquatic resources, protected trees, and wildlife corridors.
- Section 3.8, Hydrology and Water Resources, evaluates project-related impacts on surface water hydrology, water quality, groundwater, and floodplains, and presents a sea level rise risk assessment.
- Section 3.12, Socioeconomics and Communities, evaluates changes to demographics, property, employment and tax revenues, children's health and safety, and affected communities and neighborhoods, including the division and disruptions of communities and the displacement of residences and businesses.
- Section 3.14, Parks, Recreation, and Open Space, evaluates project-related impacts on parks and recreation areas.
- Section 3.15, Aesthetics and Visual Quality, evaluates changes in the visual environment from project construction and operation.
- Section 3.17, Regional Growth, evaluates impacts on regional growth, construction and operation employment, and the potential for the project to induce growth related to population and employment.
- Chapter 4, Section 4(f) and Section 6(f) Evaluations, evaluates impacts of land use conversions on protected park resources (Section 4[f]), and on recreation resources funded by the Land and Water Conservation Fund Act (Section 6[f]).

3.13.2 Laws, Regulations, and Orders

This section presents federal, state, regional and local laws, regulations, orders, and plans applicable to station planning, land use, and development. The California High-Speed Rail Authority (Authority) would develop the HSR system, including the Project Section, in compliance with all federal and state regulations. Volume 2, Appendix 2-I describes regional and local plans and policies relevant to station planning, land use, and development considered in the preparation of this analysis.

3.13.2.1 Federal

Coastal Zone Management Act (16 U.S.C. § 1451 et seq.)

The objective of the Coastal Zone Management Act of 1972 (CZMA) is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." *Coastal zone* means "the coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the lands therein and thereunder including the waters therein and thereunder), strongly influenced by each other and in proximity to the shorelines of the several coastal states, and includes islands, transitional and intertidal areas, salt marshes, wetlands and

beaches.” This act also requires projects to be planned, located, designed, and engineered for the changing water levels and associated impacts that might occur over the duration of the development. The CZMA is administered by the California Coastal Commission in most areas in California. In the San Francisco Bay Area (Bay Area), the CZMA is administered by the San Francisco Bay Conservation and Development Commission (BCDC). The CZMA requires federal actions, including permits and funding, that are reasonably likely to affect the use of land or water or natural resources within the coastal zone be consistent with policies within a state’s federally approved coastal management program.

3.13.2.2 State

California Coastal Commission Implementing Regulations (California Code of Regulations, Title 14, § 5.5)

These regulations define the permitting process including restrictions, appeals, and enforcement, as well as permits issued by local governments and public agencies.

Sustainable Communities and Climate Protection Act of 2008 (SB 375, Chapter 728)

California Senate Bill (SB) 375 requires regional planning agencies to include a sustainable communities strategy (SCS) or alternative planning strategy in the next version of their regional transportation plans (RTP). The SCS coordinates land use, housing needs, and transportation/transit planning to meet the regional target for the reduction of GHG emissions from automobiles and light trucks established by the California Air Resources Board.

Coordination is enforced by requiring transportation projects identified in the RTP to comply with the SCS in order to receive state and federal funding through the regional housing needs allocation. The requirements of SB 375 have been reflected in the 2014 RTPs adopted by the Metropolitan Transportation Commission (MTC).

California State Planning and Zoning Law (Government Code §§ 65000–66037)

This law delegates most of the state’s local land use and development decisions to cities and counties and describes laws pertaining to the regulation of land uses by local governments, including the general plan requirement, specific plans, subdivisions, and zoning.

McAteer-Petris Act (Government Code § 66600 et seq.)

The McAteer-Petris Act vests BCDC with the authority to plan and regulate activities and development in and around the San Francisco Bay, consistent with policies adopted in the Bay Plan. BCDC regulates the filling and dredging of the San Francisco Bay and any substantial change in use of any water or land within the area of BCDC’s jurisdiction through the permitting process described in the Act. The Act affords BCDC jurisdiction over five areas in and around the San Francisco Bay: (1) “Bay” jurisdiction, (2) “shoreline” jurisdiction, (3) “saltponds” jurisdiction, (4) “managed wetlands” jurisdiction, and (5) “certain waterways” jurisdiction. Only two of these BCDC jurisdictional areas are relevant for the project: the Bay and shoreline jurisdictions.

The project includes areas within BCDC jurisdiction at Mission Creek and Islais Creek in San Francisco; Visitacion Creek, Guadalupe Valley Creek, and Brisbane Lagoon in Brisbane; Oyster Bay and Colma Creek in South San Francisco; and El Zanjon Creek in San Bruno.

The agency’s decision to grant or deny a permit for the project is guided by the Act’s provisions and the standards set out in the Bay Plan. BCDC is authorized to regulate fill or dredge the San Francisco Bay and development of the “shoreline band,” which consists of the area within 100 feet of the shoreline. The McAteer-Petris Act creates broad circumstances under which a permit is required by providing that any person wishing to place fill, extract materials, or make any substantial change in the use of water, land, or structures within areas subject to BCDC’s jurisdiction obtain a permit. The term *fill* is defined broadly to include not only earth and other materials, but pilings, structures placed on pilings, and floating structures BCDC is authorized to issue a permit for fill if the applicant demonstrates that the issuance of the permit would be consistent with the provisions of Section 66605 of the Act and with the policies established for the

Bay Plan or if BCDC determines that the activity to be permitted is necessary for the health, safety or welfare of the public in the entire bay area. Pursuant to Section 66605 of the McAtteer-Petris Act, BCDC is authorized to issue a permit if the proposed fill: (1) is for a water-oriented use; (2) provides public benefits that outweigh the adverse impacts from the loss of open water areas; (3) there is no alternative upland location available for the proposed action; (4) the fill would be the minimum amount necessary to achieve the purpose of the proposed action; (5) the nature, location, and extent of fill minimizes harmful effects on the Bay; (6) the fill is constructed in accordance with sound safety standards. Volume 2, Appendix 3.1-B sets out the Bay Plan policies pertinent to the project and an assessment regarding the consistency of the project with those policies.

The McAtteer-Petris Act also provides that a permit must be obtained from BCDC prior to undertaking construction activities within the shoreline band jurisdiction. In addition, for permitting purposes, the Act allows for areas within the shoreline band to be designated by BCDC for priority uses. Within such areas, the proposed use must be consistent with the uses specified for the designated area. To obtain a permit for development within the shoreline band, the proposed project must provide for maximum feasible public access to the Bay and the shoreline.

3.13.2.3 Regional and Local

Many regional and local plans are relevant to station planning, land use, and development. These include: *Plan Bay Area 2040*; *San Francisco Bay Plan*; the City and County of San Francisco, San Mateo County, and Santa Clara County general plans; and Brisbane, South San Francisco, San Bruno, Millbrae, Burlingame, San Mateo, Belmont, San Carlos, Redwood City, Atherton, Menlo Park, Palo Alto, Mountain View, Sunnyvale, Santa Clara, and San Jose general plans, zoning codes, and specific plans. Appendix 2-I in Volume 2 lists the regional and local plans and describes the policies adopted by the cities and counties in the land use RSA that were identified and considered in the preparation of this analysis.

3.13.3 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 Council on Environmental Quality (CEQ) regulations require a discussion of inconsistencies or conflicts between a proposed undertaking and federal, state, regional, or local plans and laws. Accordingly, this section describes the inconsistency of the project alternatives with federal, state, regional, and local plans and laws to provide planning context.

3.13.3.1 Federal and State Plans and Laws

Federal and state laws and implementing regulations listed in Section 3.13.2.1, Federal, and Section 3.13.2.2, State, regulate land use and development and are applicable to this project. A summary of the federal and state requirements considered in this analysis follows:

- Federal and state acts that regulate development along the San Francisco Bay, including the CZMA and the McAtteer-Petris Act
- State laws that require local and regional agencies to develop land use strategies, including the California State Planning and Zoning Law, and the Sustainable Communities and Climate Protection Act of 2008

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 and operations on the selected project alternative. Therefore, there would be no inconsistencies between the project alternatives and federal and state laws and regulations.

3.13.3.2 McAtteer-Petris Act

BCDC is authorized to issue permits for fill of the San Francisco Bay and tidal resources if the issuance of a permit would be consistent with the policies of the Bay Plan and the provisions of Section 66605 of the Act, which include the requirement that the project must: (1) be a water

oriented use; (2) provide public benefits that outweigh the impacts on jurisdictional waters; and (3) have no alternative upland locations available.

San Francisco Bay Plan

The Bay Plan establishes policies and designates shoreline uses and conservation areas to protect and enhance San Francisco Bay for public and environmental benefit, and to encourage responsible use. The policies of the Bay Plan cover a wide range of topics including Bay fill, shoreline uses, priority use areas, public access to the shoreline, and sea level rise, which would apply to the areas of the project within the bay/tidal waterway and shoreline band. Volume 2, Appendix 3.1-B sets out the Bay Plan policies pertinent to the project and provides an assessment of the consistency of the project with those policies. Some of these pertinent Bay Plan policies include the following:

- **Bay fill policies**—Overall policies regarding the fill of San Francisco Bay/tidal waterways are found in the *Major Conclusions and Policies* Section of *Part I, Summary* of the Bay Plan. Policy 4 (Justifiable Filling) identifies that some bay filling may be justified for purposes of providing substantial public benefits (if these same benefits could not be achieved equally well without filling).
- **Shoreline band (priority use) policies**—Overall policies regarding development within BCDC's shoreline band jurisdiction are found in the *Developing the Bay and Shoreline to Their Highest Potential* Section of *Part I, Summary* of the Bay Plan. Specifically, Section 3 (a)(1) provides that areas designated for priority uses and depicted on maps within the plan are reserved for those specific uses. As such, activities proposed to occur in priority use areas must be consistent with the designated use of the area.
- **Shoreline band (non-priority use) policies**—Overall policies regarding development within BCDC's shoreline band jurisdiction are found in the *Developing the Bay and Shoreline to Their Highest Potential* Section of *Part I, Summary* of the Bay Plan. Specifically, Section 3 (a)(2) reiterates the provisions of the McAteer-Petris Act that provides that the sole basis on which BCDC may deny an application for a permit is that the project fails to provide maximum feasible public access to the Bay and the shoreline.
- **Transportation policies**—The Bay Plan also includes policies specific to transportation projects. Overall policies regarding transportation are found in the *Transportation* Section of *Part IV, Development of the Bay and Shoreline: Findings and Policies* Section. Specifically, Policy 1 encourages alternative methods of transportation that support transit and that do not require fill and Policy 4 identifies that transportation projects should be designed to maintain and enhance visual and physical access to the Bay and along the Bay shoreline. Furthermore, Finding (d) identifies that primary reliance on the single-occupant vehicle for transportation in the Bay Area means further pressures to use the Bay and that a primary goal of transportation planning, from the point of view of preserving and properly using the Bay, should be a substantial reduction in dependence on the single-occupant vehicle.
- **Sea level rise policies**—Overall policies regarding sea level rise considerations for projects are found in the *Climate Change* Section of *Part IV, Development of the Bay and Shoreline: Findings and Policies* Section. Policy 2 requires preparation of a risk assessment due to sea level rise and flooding when planning projects on shoreline areas. Policy 3 states that projects should be designed to be resilient and adaptive to sea level rise impacts.
- **Other policies**—Volume 2, Appendix 3.1-B also includes policies related to fish, other aquatic organisms and wildlife; water quality; water surface area and volume; tidal marshes and tidal flats; smog and weather; subtidal areas; safety of fills; shoreline protection; environmental justice and social equity; recreation; public access; mitigation; appearance, design, and scenic views; appearance, design, and scenic views; and public trust.

Public Benefits of the High-Speed Rail System to the Bay Area

Pursuant to California Government Code Section 66605, filling of the San Francisco Bay should be authorized only when public benefits from fill clearly exceed public detriment from the loss of the water areas. This section describes the public benefits of the HSR system.

The project would be consistent with Bay Plan policies that support development that provides substantial regional public benefits. As the northern Bay Area terminus of the HSR system, this project would provide access to a new transportation mode; contribute to increased mobility along the Caltrain corridor and throughout California; and connect the Bay Area to the rest of the statewide HSR system. Among the public benefits that the HSR system would provide are the following:

- **Avoiding fill in San Francisco Bay due to roadway and airport expansion**—The *Final Program EIR/EIS for the Proposed California High-Speed Train System* (Statewide Final Program EIR/EIS) (Authority and Federal Railroad Administration [FRA] 2005) evaluated a Modal Alternative to HSR that relied upon roadway and airport expansion to meet intercity transportation needs instead of HSR. The Modal Alternative included expansion of U.S. Highway (US) 101 by two lanes from San Francisco to San Jose, which would require placing fill in the Bay in Brisbane, South San Francisco, Burlingame, Foster City, San Carlos, Redwood City, and potential additional areas. The Modal Alternative included expansion of Interstate (I-) 880 by two lanes from Oakland to San Jose that would require fill in Bay waters in Oakland and Milpitas. The Modal Alternative also included airport expansion in Oakland and San Jose of 35 additional gates and 2 additional runways. While the Statewide Final Program EIR/EIS did not identify the specific locations of new runways, if they would be at Oakland, an additional runway would likely require Bay fill in tidal areas. The Statewide Final Program EIR/EIS identified that the Modal Alternative in the Bay Area to Merced section would affect 14 acres of coastal salt marsh which would likely be in Bay tidal areas and would far exceed the amount of Bay tidal waters affected by the project alternatives.
- **Increasing mobility options**—Using current modes of travel between San Francisco and Los Angeles takes 4.5 to 11.5 hours. The completion of Phase 1 of the HSR system, which would provide service between San Francisco and Los Angeles, would afford travel times between the two cities of less than 3 hours. A new transportation mode between San Francisco and Los Angeles would help alleviate capacity constraints at San Francisco International Airport (SFO) that result from limitations on potential new runway construction. Additionally, providing HSR service at existing local and regional transit hubs would connect HSR passengers to local, regional and state transit systems serving these stations.
- **Contributing to a cleaner environment**—The projected population growth in the Bay Area will result in an increase in vehicle miles traveled (VMT), and thus in the volume of pollutants emitted by motor vehicles. The electric-powered HSR system would reduce VMT in support of the California State Implementation Plan, thereby contributing to a decrease in the emissions of harmful air pollutants, such as particulate matter, carbon monoxide, and nitrogen oxide. The average annual GHG emissions savings provided by the system, which would equate to 1.5 million metric tons of carbon dioxide, is equal to taking 322,000 passenger vehicles off the road every year.
- **Stimulating economic activity and creating jobs**—Over the last 2 years, the Authority, working with partner agencies, was allocated and received authorization from the California Department of Finance to use nearly \$700 million in Proposition 1A bond funds for improvements to existing rail lines within certain sections of the system to allow for HSR to “blend” operations with other users. For instance, in the Project Section, the Authority contributed funds for the Caltrain Peninsula Corridor Electrification Project and the San Mateo 25th Avenue Grade-Separation Project. The Caltrain project has generated jobs and business opportunities in the Bay Area, including for small and disadvantaged businesses and workers.

- Minimizing open space conversion**—The HSR system would increase intercity travel capacity, which is presently stressed by heavy use of the interstate and state highway systems and commercial airports. This increased capacity would reduce the need for new freeways and airport facilities, thereby reducing impacts on open space, including ecologically important areas that would be associated with the development of such new infrastructure. The Authority estimates that without the HSR system, additional highway and airport projects (up to 4,300 highway lane miles, 115 airport gates, and 4 airport runways) would be needed to achieve equivalent capacity and relieve the increased pressure (Authority 2012).
- Improving safety and security**—In the Project Section, the HSR would be built according to international safety guidelines and would include several key safety mechanisms, such as the 25th Avenue Grade-Separation Project in San Mateo, positive train control, and four-quadrant gates at at-grade crossings. These improvements are expected to alleviate a number of safety issues related to the existing Caltrain tracks.

Other Requirements

The McAteer-Petris Act provides that fill of jurisdictional waters may only be allowed for “water-oriented” uses. As part of the permitting process, BCDC will make a determination regarding the consistency of the HSR project with this requirement. In addition, BCDC may issue a permit only when no upland location is otherwise available for the project. The Authority considered eleven potential alternative upland sites for the LMF and determined that the Brisbane sites were the only practicable locations for such purpose (Authority 2020a).

3.13.3.3 *Plan Bay Area and Local Plans and Laws*

As a state agency, the Authority is not required to comply with regional and local land use and zoning regulations; however, it has endeavored to design and build the project so that it is as compatible as possible with local land use and zoning regulations. For example, the Authority would design the project alternatives to minimize impacts on land use patterns, character, and intensity. The project alternatives are consistent with 195 local policies, goals, and objectives and inconsistent with certain provisions of 4 regional and local policies, goals, and objectives relevant to station planning, land use, and development in the Plan Bay Area 2040 (Association of Bay Area Governments [ABAG] and MTC 2017), City of Brisbane 2018 General Plan Amendment and updated General Plan (City of Brisbane 2018, 2020), San Mateo Downtown Area Plan (City of San Mateo 2009), and San Francisco Bay Plan (BCDC 2019). Volume 2, Appendix 2-J further details the project’s inconsistency with regional and local land use policies. It also includes a discussion of the Authority’s commitments to reconcile any inconsistencies as well as the rationale for carrying out the project where it would remain inconsistent with policies. This section provides a summary of the project’s inconsistencies with local policies, goals, and objectives for Plan Bay Area 2040, City of Brisbane 2018 General Plan Amendment, and San Mateo Downtown Area Plan. The project’s consistency with the policies in the Bay Plan is described in detail in Volume 2, Appendix 3.1-B.

Plan Bay Area 2040

The Plan Bay Area identifies the vacant and industrial lands in Brisbane between Bayshore Boulevard on the west and US 101 on the east as a priority development area due to its potential for TOD. The project alternatives would build an LMF on these lands, which would be inconsistent with the priority development area designation. The West Brisbane LMF would have a greater conflict on potential TOD because the West Brisbane LMF would affect a larger area where planned residential development is permitted than the East Brisbane LMF (see Impact LU#5).

City of Brisbane General Plan

Construction of the West Brisbane LMF (Alternative B) would be inconsistent with the City of Brisbane 2018 General Plan Amendment’s designation for planned development (residential permitted) on the site. Construction of the East Brisbane LMF (Alternative A) would be inconsistent with the General Plan Amendment’s designation for planned development

(residential prohibited) on the site. As a result, both project alternatives would be inconsistent with the Policies LU.3 and LU.5 of the land use chapter of the Brisbane General Plan, which was updated in January 2020 (City of Brisbane 2020).

San Mateo Downtown Area Plan

Construction of the project alternatives would be inconsistent with Policy VI.3 in the San Mateo Downtown Area Plan, to depress the Caltrain railway through downtown San Mateo. The alternatives would, however, be compatible with the 25th Avenue Grade-Separation Project (under construction), and with the broader intent of grade separation of the rail corridor from roadways through downtown San Mateo.

3.13.4 Methods for Evaluating Impacts

Evaluating impacts on station planning, land use, and development is a requirement of the National Environmental Policy Act (NEPA) and CEQA. This section defines the RSA and describes the methods used to analyze the existing and planned land uses along the rail alignment and around the HSR station sites, and to determine the construction and operations impacts on these land uses. As identified in Section 3.13.1, Introduction, other resource sections or chapters in this Draft EIR/EIS provide additional information related to station planning, land use, and development.

3.13.4.1 Definition of Resource Study Area

As explained in Section 3.1, Introduction, RSAs are the geographic boundaries in which the environmental investigations specific to each resource topic were conducted. The RSA for impacts on land use and development encompasses the areas directly or indirectly affected by construction and operation of the project.

Direct short-term land use impacts would occur as a result of temporary construction easements (TCE). These TCEs would be required for the temporary use of areas for equipment/material laydown, storage, and access, as well as for temporary road closures. Direct long-term impacts would result from permanent conversion of lands to transportation-related land use, such as the development of the Brisbane LMF, expansion of the Millbrae and San Jose Diridon Stations, construction of the passing tracks under Alternative B, or construction of a viaduct to I-880 or to Scott Boulevard under Alternative B. As such, the RSA for analyzing direct impacts is the project footprint.

Indirect long-term impacts would include permanent changes in land use development patterns and densities near HSR stations that are inconsistent with existing plans. Indirect short-term construction impacts related to noise, dust, transportation, and aesthetics would reflect a change in patterns of land use during construction. As such, the RSA for analyzing indirect impacts is 0.5 mile from the project footprint. A distance of 0.5 mile from the project footprint was chosen to characterize indirect impacts because the indirect noise, air quality, and visual impacts would not extend beyond 0.5 mile from the project footprint. Table 3.13-1 shows the RSA for station planning, land use, and development.

Table 3.13-1 Definition of Station Planning, Land Use, and Development Resource Study Areas

Type	General Definition
Direct impacts	Within the project footprint ¹
Indirect impacts	Within 0.5 mile of the project footprint

¹ The project footprint includes all areas required to build, operate, and maintain all permanent high-speed rail facilities, including permanent right-of-way, permanent utility and access easements, and temporary construction easements.

3.13.4.2 *Impact Avoidance and Minimization Features*

IAMFs are project features that are considered to be part of the project and are included as applicable in each of the alternatives for purposes of the environmental impact analysis. Volume 2, Appendix 2-E provides the full text of the IAMFs that are applicable to the project. The following IAMFs are applicable to the land use analysis:

- LU-IAMF#1: HSR Station Area Development: General Principles and Guidelines
- LU-IAMF#2: Station Area Planning and Local Agency Coordination
- LU-IAMF#3: Restoration of Land Used Temporarily during Construction
- AQ-IAMF#1: Fugitive Dust Emissions
- AQ-IAMF#2: Selection of Coatings
- AQ-IAMF#3: Renewable Diesel
- AQ-IAMF#4: Reduce Criteria Exhaust Emissions from Construction Equipment
- AQ-IAMF#5: Reduce Criteria Exhaust Emissions from On-Road Construction Equipment
- AVQ-IAMF#1: Aesthetic Options
- SS-IAMF#1: Construction Safety Transportation Management Plan
- TR-IAMF#2: Construction Transportation Plan
- TR-IAMF#3: Off-Street Parking for Construction-Related Vehicles
- TR-IAMF#6: Restriction on Construction Hours
- TR-IAMF#7: Construction Truck Routes

This environmental impact analysis considers these IAMFs as part of the project design. Within Section 3.13.6, Environmental Consequences, 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.

3.13.4.3 *Methods for Impact Analysis*

This section describes the sources and methods used to analyze potential project impacts on station planning, land use, and development. These methods apply to both the 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. Inconsistencies and conflicts with regional and local plans and policies that regulate station planning, land use, and development (as presented in Volume 2, Appendix 2-J) also were considered in this analysis (Section 3.13.3).

Existing Land Uses

For the purposes of this analysis, existing land uses in the RSA were determined by reviewing background documents, including zoning maps and corroborating with aerial imagery and geographic information system (GIS) data. The Authority developed dominant land use categories from the GIS data to standardize the classification of land uses among the governing jurisdictions. Planned land uses were derived from land use designations in the cities' general plans and specific plans.

The Authority used GIS tools and aerial photographs to identify the existing land uses and sensitive land uses (e.g., residential areas, schools) in the RSA. The project would predominantly be within an existing railroad right-of-way, where there are no plans to remove the track and develop the area with other land uses. Therefore, because the project would not affect the existing uses of this track, the focus on the mapping was for areas outside of the existing Caltrain right-of-way and existing railroad track.

Once the existing and sensitive land uses were mapped, the Authority identified where and for how long (e.g., temporarily or permanently) nearby land uses would be directly or indirectly affected. The Authority conducted this analysis by quantifying the conversion of existing land uses to a transportation-related use that would result from building the project, as well as property acquisitions required to build the project. These quantifications did not include the area where the project would occur within the existing railroad right-of-way because the project would not affect

the existing or planned land uses of this right-of-way. In addition, the analysis describes the potential impacts associated with introducing HSR to existing land uses. The analysis considers whether modifications to existing stations in San Francisco, Millbrae, and San Jose would change the development trend or character of the station, parking supply and demand, or increase density or development in the station areas.

Planned Land Uses

The Authority collected data from local municipalities, such as regional and local land use plans, transportation plans, subarea plans, and other relevant planning documents to establish the planned development along the RSA. General plan land use maps illustrate the overall land use patterns envisioned by the governing city or county and can also be indicative of existing land uses. Volume 2, Appendix 3.13-A, provides general plan land use maps illustrating the land use patterns along the rail alignment and around HSR station sites. Information on land uses in the RSA also was informed through community engagement and coordination with the local governments to identify key land use issues relating to the design and alignment of the project. The proposed stations have been planned in collaboration with the cities along with public input to identify key site planning concepts regarding station design, access, connectivity, circulation, and parking. For a review of outreach activities, such as technical working group meetings with agency, city, and county staff; meetings with tribes and other local groups; and site visits to observe existing conditions in the RSA, refer to Chapter 9, Public and Agency Involvement. The methodology used to map planned land uses and to identify impacts on planned land uses was the same as the methodology for existing land uses.

BCDC Jurisdictional Areas

This section also includes an analysis of the effects of the project on areas within BCDC jurisdiction. To conduct this analysis, the Authority used detailed land cover information developed for the *San Francisco to San Jose Project Section Aquatic Resources Delineation Report* (Authority 2020b) to identify the areas subject to BCDC jurisdiction. The Authority then consulted with BCDC staff to verify the mapping of BCDC jurisdictional areas in several correspondences between August and October 2019. As a part of this effort, the Authority also verified the location of the shoreline band, including priority use areas. This analysis considers Bay Plan policies relative to project components within BCDC's shoreline band, including priority use areas.

Planned Population Growth

The potential population growth from construction and operation of the project was calculated based on the methodology in Section 3.17.4.3, Methods for Impact Analysis. The analysis considers whether the project would induce population growth beyond planned levels based on the existing plans for the region.

3.13.4.4 Method for Evaluating Impacts under NEPA

CEQ NEPA regulations (40 Code of Federal Regulations 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 a project.

- **Context**—For this analysis, the *context* includes adopted local plans, policies, and regulations; existing and planned land use types, patterns, and densities within the RSAs for direct and indirect impacts; and the relative sensitivity of surrounding land uses to construction or operational land use changes.
- **Intensity**—For this analysis, *intensity* was determined by assessing the degree to which the project would result in changes to land uses in the RSA, including direct and indirect changes to the type, pattern, or density of land uses; inconsistency with regional and local land use plans, including the disruption of existing or planned development; and the duration of the effect.

3.13.4.5 *Method for Determining Significance under CEQA*

For this analysis, the project would result in a significant impact on station planning, land use, and development if it would:

- Cause a substantial change in land use patterns by introducing incompatible land uses.
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulations adopted for the purpose of avoiding or mitigating an environmental impact.
- Induce substantial population growth in an area, beyond planned levels, either directly or indirectly.

Section 3.12 discusses physical division of an established community. As described in Section 3.13.3, the HSR project is an undertaking of state and federal agencies, and as such any conflicts with applicable regional and local plans and policies are not environmental impacts for determining significance under CEQA.

3.13.5 **Affected Environment**

This section describes existing land uses, planned land uses and planned development, BCDC jurisdictional areas, and planned population growth in the RSA from north to south. This information provides the context for the environmental analysis and evaluation of impacts.

3.13.5.1 *Existing Land Uses*

The Project Section would travel in an existing rail corridor, largely within the Caltrain right-of-way from San Francisco to San Jose. Prior to Caltrain, this alignment was used by the San Francisco and San Jose Railroad (later the Southern Pacific line) that began construction in the late 19th century. As the rail alignment and stations were built, new towns grew up along the railway that became the present-day cities on the San Francisco Peninsula. Immediately adjacent to the station areas, new development was influenced by activities associated with the railroad stations, including the creation of active downtown areas and employment hubs.

Transportation right-of-way is the single largest land use in the RSA for direct impacts. Residential uses are the largest developed component in the RSA, with multifamily and single-family residential uses comprising almost equal portions of the RSA. The largest concentrations of multifamily housing are in San Francisco, and to a lesser extent in San Mateo, Redwood City, Mountain View, Sunnyvale, and San Jose. The largest concentrations of single-family neighborhoods are in suburban and lower-density neighborhoods, including portions of San Bruno, Atherton, and Palo Alto. Mixed-use development that combines residential uses with either office or commercial development is located most notably in San Francisco, Millbrae, San Mateo, and Redwood City.

Public, institutional, school, and related park uses account for the next highest proportion of developed land uses. Major institutional uses include University of California, San Francisco (UCSF) campus buildings near the 4th and King Street Station and Stanford University in Santa Clara County near the Palo Alto Caltrain Station. Commercial uses are located throughout the RSA. Industrial uses are in the Brisbane Baylands and include the Kinder Morgan Brisbane Terminal, which stores and distributes aviation fuel to SFO and the San Francisco Recology recycling facility. Other industrial uses occur near the Millbrae Station, which is an existing Bay Area Rapid Transit (BART)/Caltrain station. Large pockets of industrial uses are located in San Francisco, South San Francisco, Burlingame, San Carlos, Sunnyvale, Santa Clara, and San Jose. Because the Project Section runs through a largely urbanized area, there is very little vacant land in the RSA. The largest area of vacant land is in the Brisbane Lagoon area, which was historically used for landfill and railroad storage. Table 3.13-2 shows existing land uses adjacent to the rail alignment by subsection, which are described in additional detail following the table.

Table 3.13-2 Existing Land Uses Adjacent to the San Francisco to San Jose Project Section

City/Segment	East/West of Alignment	Predominant Land Uses ^{1,2}
San Francisco to South San Francisco Subsection		
San Francisco 4th and King Streets to 22nd Street	East	Mixed use, residential, commercial, parks/open space, education/public/semi-public, industrial, commercial
	West	Mixed use, industrial, commercial, residential
22nd Street to Bayshore area	East	Industrial, residential, education/public/semi-public
	West	Industrial, residential
Brisbane	East	Industrial, vacant, parks/open space
	West	Industrial, vacant, commercial, parks/open space, residential
South San Francisco	East	Commercial, mixed use
	West	Residential, commercial, mixed use
San Bruno to San Mateo Subsection		
San Bruno	East	Industrial, residential, mixed use, commercial, parks/open space
	West	Residential, mixed use, commercial
Millbrae	East	Parks/open space, industrial, residential, commercial
	West	Residential, commercial, mixed use
North Burlingame border to Broadway	East	Commercial
	West	Commercial, residential, public facilities
Broadway to south Burlingame border	East	Commercial, residential
	West	Commercial, residential, mixed use
San Mateo to Palo Alto Subsection		
North San Mateo border to 1st Street	East	Residential, education, mixed use, commercial
	West	Residential, commercial, mixed use
1st Street to Hayward Park Caltrain Station (Concar Drive)	East	Commercial, residential, mixed use, education
	West	Commercial, residential, mixed use
Hayward Park Caltrain Station (Concar Drive) to Hillsdale Boulevard	East	Mixed use, commercial, residential
	West	Commercial, residential, mixed use
Hillsdale Boulevard to South San Mateo border	East	Residential, commercial
	West	Commercial, mixed use, residential
Belmont	East	Residential, commercial, education
	West	Residential, commercial, mixed use, education

City/Segment	East/West of Alignment	Predominant Land Uses ^{1,2}
San Carlos	East	Industrial, residential, commercial
	West	Residential, mixed use
Redwood City	East	Residential, education/public/semi-public, mixed use, industrial
	West	Residential, education, mixed use
North Fair Oaks (unincorporated)	East	Industrial, residential, commercial
	West	Residential, mixed use
Atherton	East	Residential
	West	Residential, mixed use
Menlo Park	East	Residential, commercial, public/semi-public space
	West	Commercial, residential, mixed use
Palo Alto	East	Residential, mixed use, commercial
	West	Residential, education/public/semi-public spaces, commercial, mixed use
Mountain View to Santa Clara Subsection		
San Antonio Road to Castro Street	East	Residential, office, industrial, mixed use
	West	Residential, office, commercial, mixed use
Castro Street to South Mountain View border	East	Residential, mixed use
	West	Residential, mixed use, commercial
North Sunnyvale border to Sunnyvale Avenue	East	Residential, industrial, commercial
	West	Residential, education/public/semi-public space, commercial, mixed use
Sunnyvale Avenue to Lawrence Expressway	East	Residential, industrial
	West	Commercial, residential, mixed use
San Jose Diridon Station Approach Subsection		
Scott Boulevard to I-880	East	Industrial, commercial
	West	Residential, commercial, public facilities
I-880 to San Jose Diridon Station	East	Industrial, commercial
	West	Residential, public facilities, industrial
San Jose Diridon Station to West Alma Avenue	East	Industrial, residential
	West	Industrial, residential

I- = Interstate

¹ Includes prominent, large-scale land uses. Most subsections also include small parks/open spaces, commercial blocks, and small educational facilities.

² Unless otherwise specified, *mixed use* refers to residential/commercial mixed use.

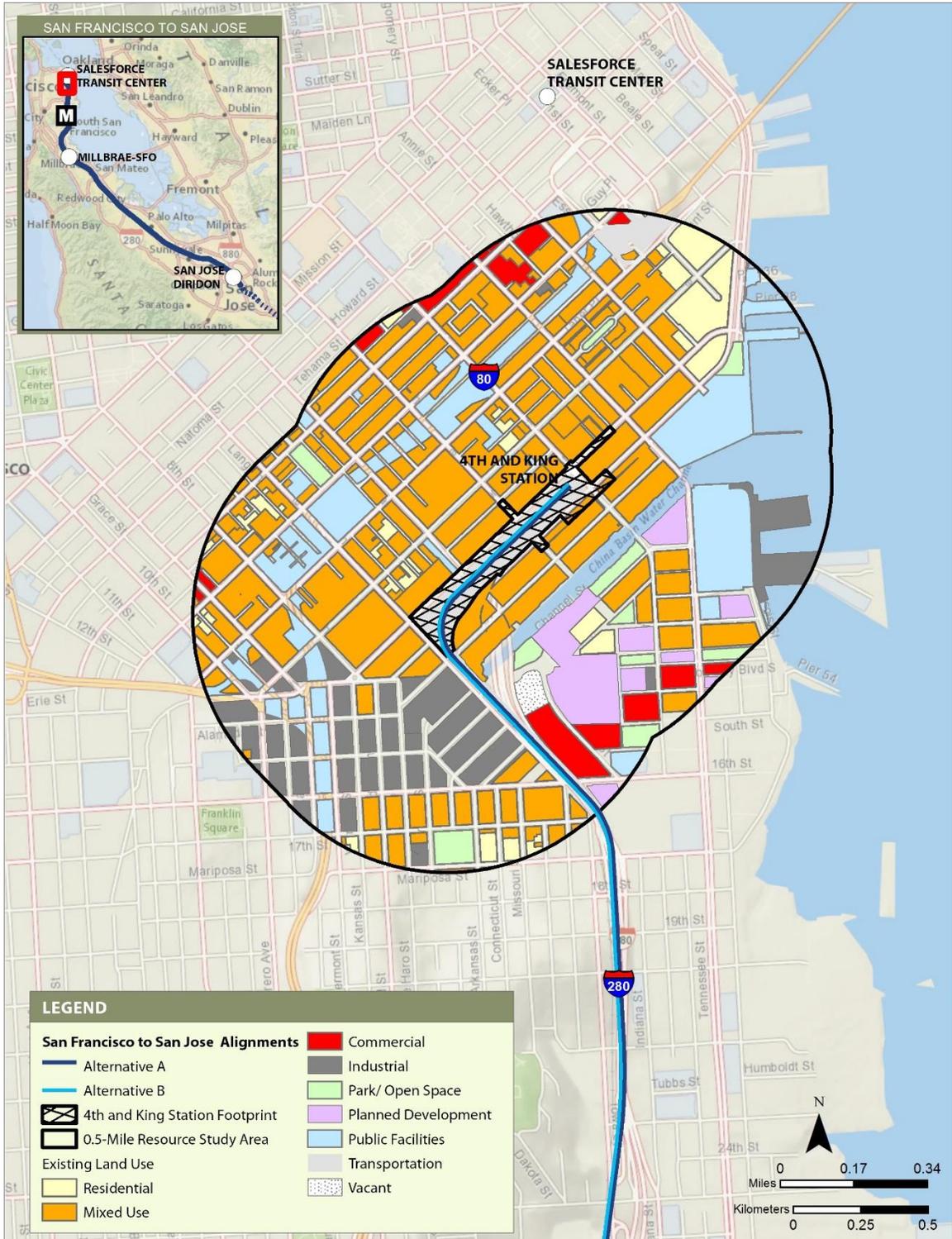
San Francisco to South San Francisco Subsection

The San Francisco to South San Francisco Subsection begins at Fourth and King Streets in downtown San Francisco and extends through San Francisco and Brisbane to Linden Avenue in South San Francisco. Land uses in the South of Market (SoMa) neighborhood adjacent to the project footprint in downtown San Francisco are primarily urban and mixed uses, with some retail, live/work loft, residential, industrial, commercial, and institutional (UCSF buildings) uses. Between the 22nd Street and Bayshore areas, where the alignment would travel through four existing Caltrain tunnels, adjacent land uses are primarily light industrial and warehouse, with some residential east of the alignment in the Potrero Hill neighborhood, south of Oakdale Avenue in the Bayview neighborhood, and in Visitacion Valley. The primary land uses south of Visitacion Valley are industrial and vacant land in Brisbane. The alignment then continues along the west side of Brisbane Lagoon, and is separated from upland residential uses by Bayshore Boulevard as it skirts San Bruno Mountain. As the track alignment continues along Brisbane Lagoon, a park-and-ride lot is just south of the intersection of Tunnel Avenue and Bayshore Boulevard. The alignment continues through predominantly commercial and mixed uses in South San Francisco, with some residential uses west of the alignment.

4th and King Street Station Area

The 4th and King Street Station is the Caltrain terminus in the San Francisco SoMa neighborhood. The station is generally bounded by Townsend Street to the northwest, Fourth Street to the northeast, and King Street to the southeast. The one-story station building fronts directly onto Fourth Street with limited setbacks and connects to an approximately two-story glass-covered depot. Behind the depot is the northern Caltrain terminus with 6 platforms and 12 tracks, all at grade. A San Francisco Municipal Railway (MUNI) bus stop is along Fourth Street in front of the Caltrain depot.

The 4th and King Street Station is surrounded by a historic industrial and manufacturing district that has transitioned to include a mix of mid- and high-rise office, art spaces, mixed-use, commercial, hotel, and warehouse uses (Figure 3.13-1). Buildings in this area are an eclectic mix of red brick warehouse and industrial buildings, modern lofts, and condominiums. The area north of the 4th and King Street Station is characterized by an active mix of industrial warehouses, offices, hotels, restaurants, and other uses. East of the 4th and King Street Station is Oracle Park (home field of the San Francisco Giants, a Major League Baseball team) and southeast of the 4th and King Street Station are portions of the UCSF Mission Bay campus, the South Beach Marina, and the San Francisco Bay.



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Figure 3.13-1 Existing Land Uses—4th and King Street Station Area

Brisbane Light Maintenance Facility Area

Alternative A (East Brisbane Light Maintenance Facility)

The proposed East Brisbane LMF site is bounded by the Caltrain alignment on the west and US 101 on the east (Figure 3.13-2). The majority of the site is vacant, having been a Brisbane Class II Landfill from 1932 to 1967, and is now used as a repository and recycling area for materials from construction sites in the region, such as sand, dirt, and gravel. Industrial uses at the northern and western edge of the site include San Francisco Recology, two lumber yards, and a soil processing facility. Visitacion Creek divides the site, extending from Tunnel Avenue to US 101. At the southwestern edge of the property is the San Francisco Products Pipeline (SFPP) Kinder Morgan Brisbane Terminal. This facility stores and distributes aviation fuel to SFO, as well as gasoline and diesel fuel to various retail businesses. The Schlage Lock project is under construction as of December 2019 and will provide 1,679 residential units and 46,700 square feet of retail proximate to the LMF site. The Bayshore Caltrain Station also is in this area.

Alternative B (West Brisbane Light Maintenance Facility)

The proposed West Brisbane LMF site is bounded by the existing Caltrain corridor on the east and Bayshore Boulevard on the west (Figure 3.13-2). The site was historically used as the Bayshore freight yard that was established in 1907 by the Southern Pacific Railroad on excavated materials and dredged fill from the San Francisco Bay. This existing site is vacant except for buildings remaining from the railroad era, including the Roundhouse and the Lazzari Fuel Company building, and some industrial warehouses and businesses along Bayshore Boulevard, including the Bayshore Sanitary District Pump Station. The retail/residential Schlage Lock project is under construction north of the site. The proposed West Brisbane LMF would be on Icehouse Hill, which is a hill with grassland habitat (see Figure 3.13-3). The West Brisbane LMF would be closer to residential land uses associated with Visitacion Valley and residential and commercial land uses in the eastern portion of Daly City (adjacent to the north Brisbane city limits) than the East Brisbane LMF. The Bayshore Caltrain Station and development along Bayshore Boulevard are also in this area, northeast of the proposed West Brisbane LMF.

San Bruno to San Mateo Subsection

The San Bruno to San Mateo Subsection extends from Linden Avenue in South San Francisco through San Bruno, Millbrae, and Burlingame to Ninth Avenue in San Mateo. Within San Bruno, land uses along the alignment consist primarily of low- and medium-density residential housing with some commercial and light industrial uses. An area of open space adjacent to the east side of the alignment in San Bruno provides a buffer between SFO and nearby residential uses. In Millbrae, the area west of the project footprint along El Camino Real is primarily commercial, with low- and medium-density businesses and some residential uses. East of the project footprint, the area north of the Millbrae Station consists primarily of residential uses, while the area south of the station is primarily mixed use, industrial, and commercial uses. South of the Millbrae Station, the alignment continues through Burlingame, where adjacent land uses are predominantly commercial to the east and residential to the west. Directly adjacent to the east side of the project footprint are Burlingame High School and Washington Park. Continuing south through San Mateo, the alignment traverses primarily residential uses, with some commercial uses, particularly in downtown San Mateo.

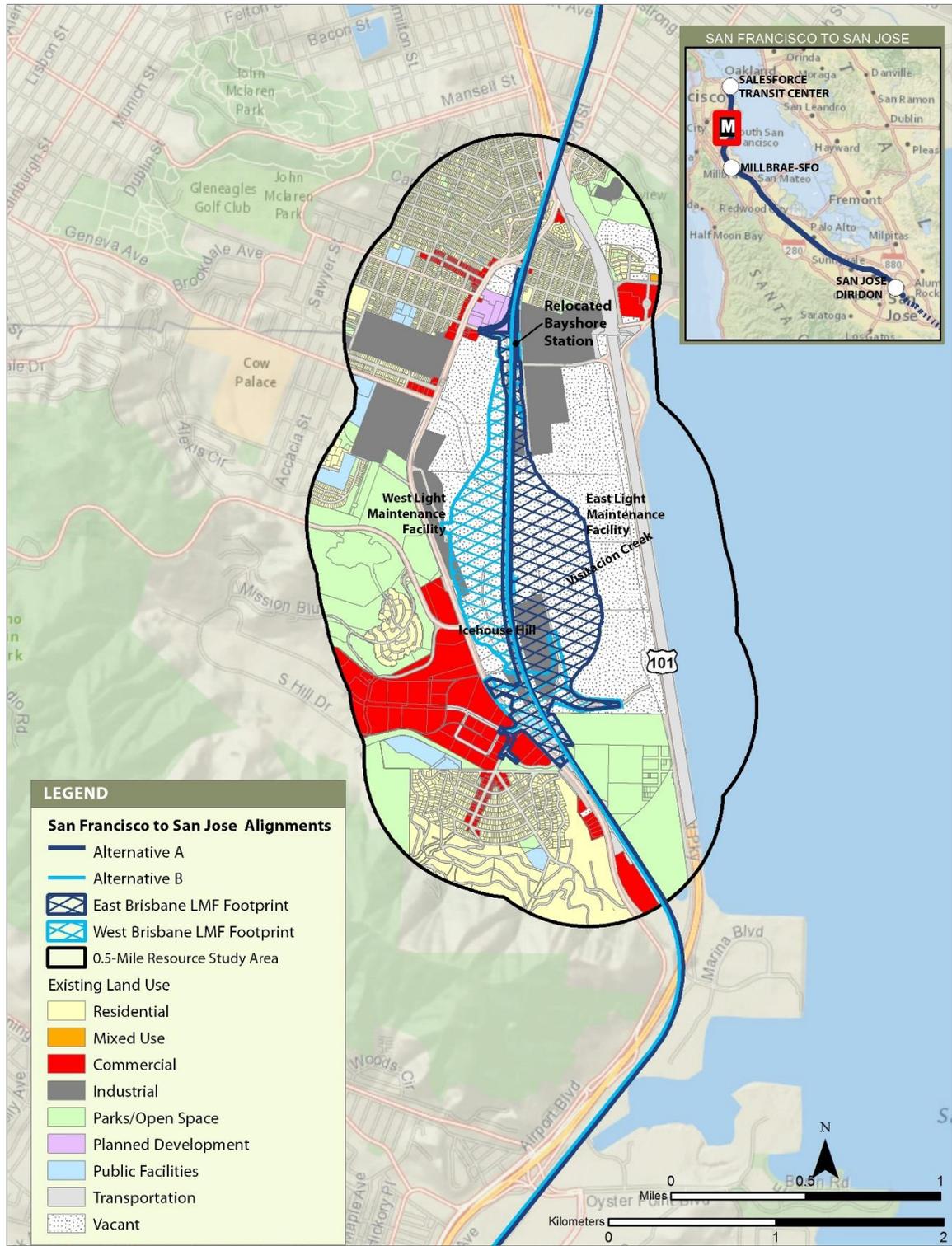


Figure 3.13-2 Existing Land Uses—Brisbane Light Maintenance Facility Area

Millbrae Station Area

The existing Millbrae Station is located at 200 Rollins Road and is bounded by Millbrae Avenue to the south and El Camino Real to the west. The multimodal station features a modern, two-story building, a five-story parking structure, and a large surface parking lot on the east side of the station. The station services both Caltrain and BART with six tracks (two for Caltrain and four for BART) running through the station's concourse mezzanine. In addition, a bus transit center that serves San Mateo County Transit District (SamTrans) and private bus providers is located between the parking structure and surface parking lot.

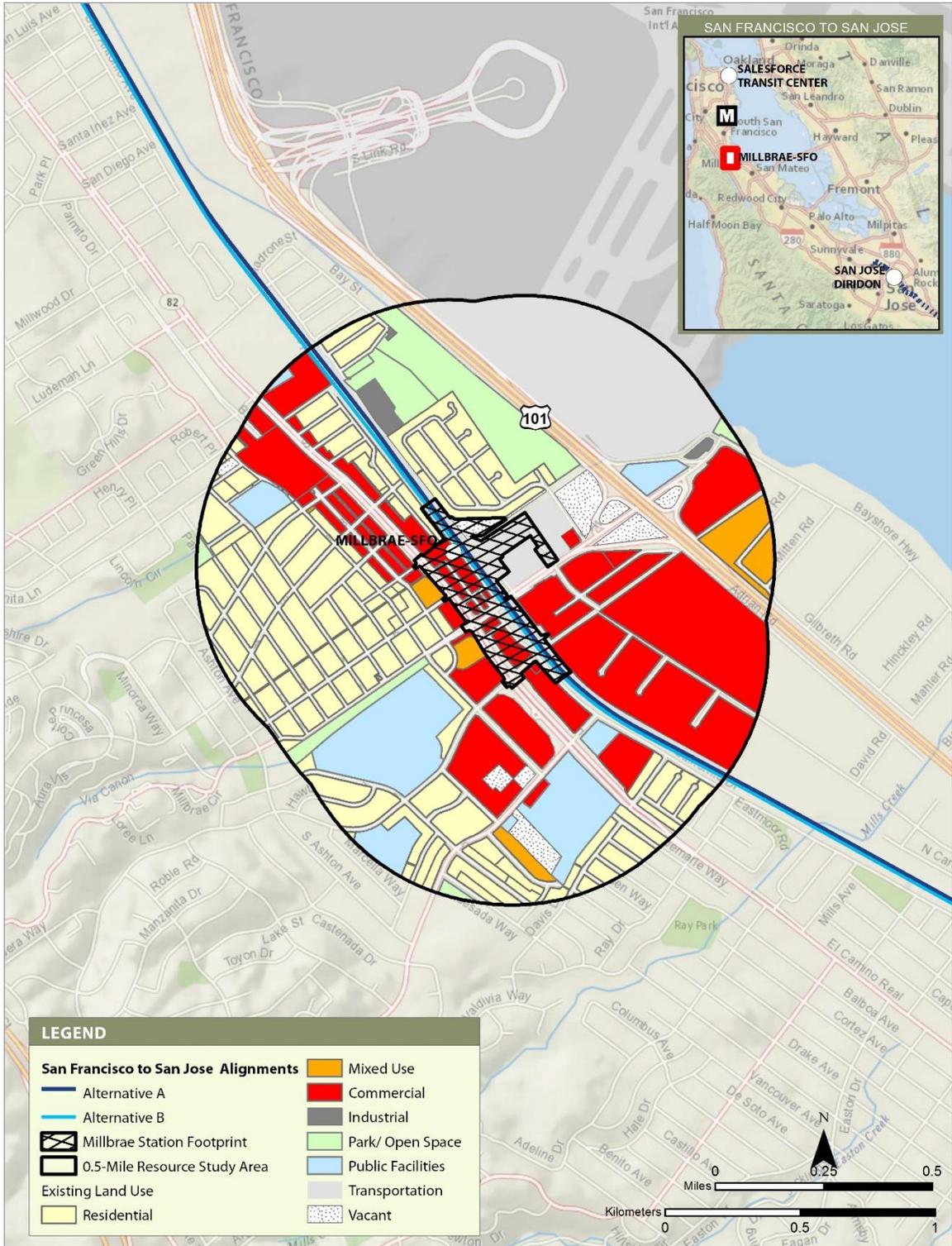
El Camino Real, a major auto-oriented arterial road, is immediately west of the Millbrae Station. Commercial uses and the Millbrae Serra Convalescent Hospital are between the Millbrae Station and El Camino Real. A mix of larger-scale mixed-use development and smaller one- to two-story retail, office, and general commercial uses front El Camino Real. Small apartment complexes and single-family homes are behind the commercial uses on the west side of El Camino Real, and light industrial and commercial uses are just south of the station. Much of the area immediately east of the station is comprised of the existing parking structure serving the station. Single-family residential uses are immediately north of the station, and SFO is roughly 0.6 mile north of the station (Figure 3.13-3).

San Mateo to Palo Alto Subsection

The San Mateo to Palo Alto Subsection extends from Ninth Avenue in San Mateo through Belmont, San Carlos, Redwood City, North Fair Oaks, Atherton, and Menlo Park to San Antonio Road in Palo Alto. Land uses adjacent to the project footprint in San Mateo are primarily residential between Ninth Avenue and Hayward Park Caltrain Station, mixed use and commercial between State Route (SR) 92 and Hillsdale Boulevard, and residential with limited commercial and mixed uses south of Hillsdale Boulevard. East of the alignment south of SR 92 is the San Mateo County Event Center and the Bay Meadows TOD project—an 83-acre redevelopment site comprised of 1,116 residential units, 765,000 square feet of offices, 18 acres of public spaces, and a private high school. Hillsdale Shopping Center is on the east side of the project footprint and west of El Camino Real.

The primary adjacent land uses in Belmont are single-family residential and commercial along the El Camino Real corridor. West of the project footprint in San Carlos are single-family residential and local retail and service/convenience commercial uses along El Camino Real, while east of the project footprint are primarily industrial uses north and south of a residential neighborhood. US 101 and predominantly industrial uses are further east, as well as the San Carlos Airport. The Redwood City area provides a relatively balanced mix of residential, commercial, and industrial uses, while the unincorporated community of North Fair Oaks is largely residential.

Land use in Atherton is primarily low-density, single-family residential. Holbrook-Palmer Park is adjacent on the east side of the Caltrain alignment. The land uses in Menlo Park are general commercial and varying types of residential from medium-density apartment to single-family suburban. Burgess Park is near downtown Menlo Park. El Palo Alto and El Camino Parks are in Palo Alto; the Stanford Shopping Center and Stanford University lie southwest of El Camino Park. Palo Alto High School is adjacent to the east side of the project. Most of the area within 0.5 mile of the project footprint in Palo Alto contains single-family residential units.



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Figure 3.13-3 Existing Land Uses—Millbrae Station Area

Mountain View to Santa Clara Subsection

Land uses in Mountain View are primarily residential uses, with some industrial, office, and arterial commercial uses along SR 85 and SR 237. Rengstorff Park is adjacent to the west side of the Caltrain alignment. The area east of the project footprint in Sunnyvale is primarily industrial interspersed with low- and medium-density residential. Neighborhood shopping, general business, and residential uses are to the west. Through Santa Clara, the adjacent uses consist of residential uses, and office/research and development. Heavy industrial uses are east of the project footprint, with research and development, office, and mixed uses to the west.

San Jose Diridon Station Approach Subsection

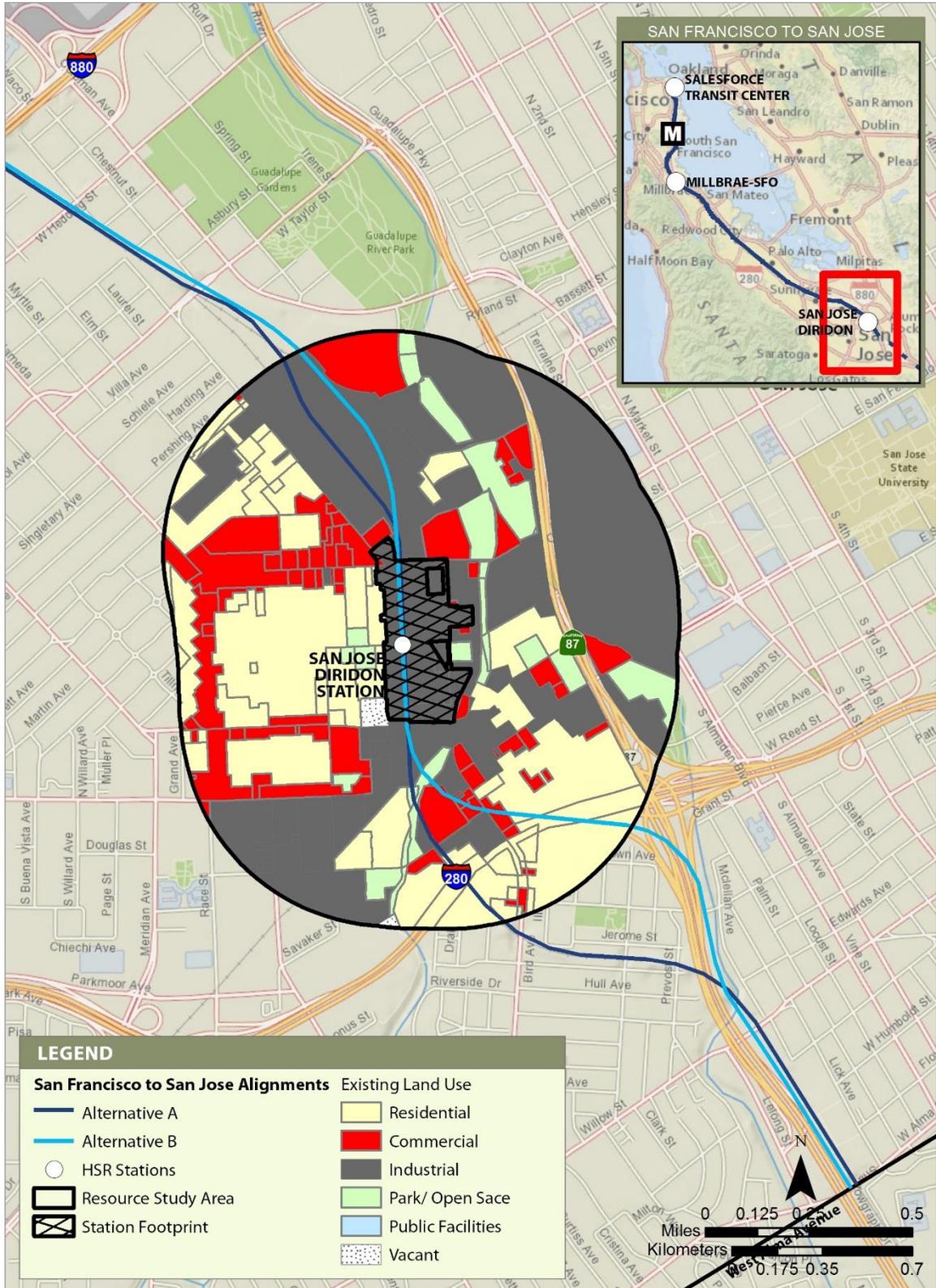
Land uses north of the San Jose Diridon Station include areas of commercial and industrial uses on the northeast side of the existing tracks and residential neighborhoods and commercial areas southwest of the railway. Immediately north of the San Jose Diridon Station, land uses are a mix of large industrial and civic uses such as the SAP Center at San Jose (an indoor arena) and Caltrain's 20-acre Central Equipment and Maintenance Facility, interspersed with lower-density residential uses. Northeast of the alignment is the Norman Y. Mineta San Jose International Airport.

South of the San Jose Diridon Station, single-family and multifamily residential uses predominate. The guideway would pass between residential neighborhoods and cross over the Guadalupe River on an elevated structure and continue along the edges of residential neighborhoods.

San Jose Diridon Station Area

The existing San Jose Diridon Station, a multimodal transit facility, is in an urbanized area on the western edge of downtown San Jose. The station connects to Santa Clara Valley Transportation Authority (VTA) bus and light rail service; Altamont Corridor Express, Amtrak, and Caltrain's Capitol Corridor commuter rail service; airports; and highways. Large surface parking lots surround both the SAP Center at San Jose and the San Jose Diridon Station.

Diverse land uses—ranging from single-family and multifamily residential units to service/commercial, office, institutional, parks, and industrial—surround the San Jose Diridon Station (Figure 3.13-4). Transportation and public/quasi-public-related uses as well as surface parking lots also dominate the area. In addition to the San Jose Diridon Station, prominent land uses in the area include Guadalupe River Park, Cahill Park, the Children's Discovery Museum, and the SAP Center at San Jose with its associated parking. Commercial, industrial, and residential uses are located side by side, and older residential and industrial buildings are intermixed with commercial uses and higher-density housing. In general, mid- and larger-scale industrial and commercial uses are to the north along Julian Street and Stockton Avenue north to Coleman Avenue, and smaller-scale residential and nonresidential uses are to the south around the San Carlos Street area. Single-family and multifamily residential neighborhoods flank the existing San Jose Diridon Station to the west with industrial and park uses to the east.



Sources: City of San Jose 2014, 2018

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Figure 3.13-4 Existing Land Uses—San Jose Diridon Station Area

3.13.5.2 *Planned Land Uses*

The California State Planning and Zoning Law requires that each county and city in the state develop and adopt a general plan. The general plan consists of a statement of development policies and includes a map or maps and text setting forth goals and policies. General plans are comprehensive long-term plans for the physical development of the individual city or county. General plan land use maps designate areas for various uses, primarily to avoid incompatibilities of land use. In some areas, existing land uses are not consistent with the general plan land use designations, particularly where certain land uses existed prior to the adopted land use designations and are considered legal nonconforming uses, and where land is undeveloped but is designated for certain uses in the future. For example, in the Brisbane area, while the majority of land adjacent to the railway is vacant, this vacant land is designated for planned development (residential permitted), which would allow for a combination of residential and commercial development and planned development (residential prohibited), which would only allow for commercial development. Legal nonconforming uses are allowed to continue; however, they cannot be changed or replaced by another nonconforming use and the nonconforming use cannot be expanded. If redevelopment is planned in an area with legal nonconforming uses, the new use would have to conform to the general plan land use designation. Volume 2, Appendix 3.13-A provides general plan maps illustrating the planned land use patterns along the project corridor for reference.

The project provides an opportunity to improve and expand local transit systems connecting to the HSR stations and to offer additional job and housing growth at key central locations around stations. The proposed HSR stations and Brisbane LMF sites have existing rail and bus transit facilities with linkages to local and regional transit services. The 4th and King Street Station is connected to Caltrain and MUNI; the proposed Brisbane LMF sites are in an area served by Caltrain, MUNI, and SamTrans; the Millbrae Station is connected to Caltrain, BART, SamTrans bus routes, SFO, and highways; and the San Jose Diridon Station is connected to VTA bus and light rail service, Altamont Corridor Express, Amtrak, and Caltrain's Capitol Corridor commuter rail service. Local and regional plans relevant to the project identify the need to improve mobility and reduce dependency on automobile travel by improving transit accessibility and encouraging the use of alternative transportation modes. Specifically, several adopted plans, such as the Transit Center District Plan in San Francisco (City and County of San Francisco 2012), the Millbrae Station Area Specific Plan (MSASP) in Millbrae (City of Millbrae 2016), and the Diridon Station Area Plan (City of San Jose 2014) address HSR and anticipate HSR station facilities and complementary land uses. Additionally, San Francisco, Millbrae, and San Jose have recognized and incorporated mixed use or TOD in their general plans and other land use plans. Brisbane also has incorporated mixed use and TOD in their general plan to guide development and land uses in the Brisbane area.

Planned development is most relevant around station areas and the proposed Brisbane LMF sites because these are the areas where planned development would be most affected by the project alternatives. The project's infrastructure improvements along the tracks would mostly be within the existing Caltrain right-of-way. No development is planned within the existing Caltrain right-of-way; therefore, the project improvements within the existing Caltrain right-of-way would not result in any impacts on planned development. Nonetheless, there are small areas where track improvements would require acquisition of areas outside the existing Caltrain right-of-way. Those locations were reviewed to determine if any development is planned in those locations. Land use plans and objectives, planned development projects, and planned land uses from general plans provide the context for this discussion.

The project crosses several jurisdictions and each jurisdiction has a general plan with its own planned land uses. Because the planned land uses from the general plans vary between jurisdictions, the planned land uses were simplified into categories. This allows for a consistent

analysis of potential impacts on planned land uses. For the purposes of this analysis, the planned land uses from the general plans were simplified into the following 10 categories:

- Residential
- Mixed use
- Commercial
- Heavy commercial
- Industrial
- Parks/open space
- Planned development (residential permitted)
- Planned development (residential prohibited)
- Public facilities
- Transportation

San Francisco to South San Francisco Subsection

4th and King Street Station

The 4th and King Street Station is in the urban area south of Market Street in downtown San Francisco. The land use RSA for the 4th and King Street Station area extends across two priority development areas identified in *Plan Bay Area 2040*—the Eastern Neighborhoods and Mission Bay Priority Development Areas. These areas have been identified and approved for future growth. *Plan Bay Area 2040* projects that priority development areas will accommodate two-thirds of all housing and employment growth through the year 2040, on less than 5 percent of the land in the Bay Area (ABAG and MTC 2017). However, there are no planned developments in the area where the 4th and King Street Station would be located.

Zoning regulations in the San Francisco Planning Code reflect the *San Francisco General Plan* (City and County of San Francisco 1996), the *Mission Bay North Redevelopment Plan* (City and County of San Francisco 1998), and the *Redevelopment Plan for the Mission Bay South Redevelopment Project* (City and County of San Francisco 2018a). The code envisions a range of uses (e.g., mixed use, industrial, public facilities, residential, commercial, ballpark, open space), as illustrated on Figure 3.13-5, that support transit use and complement the high-density urban environment near the 4th and King Street Station. This development would be served by the Central Subway (expected completion in 2020 with start of revenue service in 2021), which will extend the MUNI Metro T Third Line from the 4th and King Street Station to Chinatown through the SoMa and Union Square neighborhoods. New stations along this 1.7-mile alignment would be built at Fourth and Brannan Streets, Yerba Buena/Moscone Station at Fourth and Folsom Streets, Union Square/Market Street Station on Stockton Street at Union Square, and Chinatown Station at Stockton and Washington Streets.

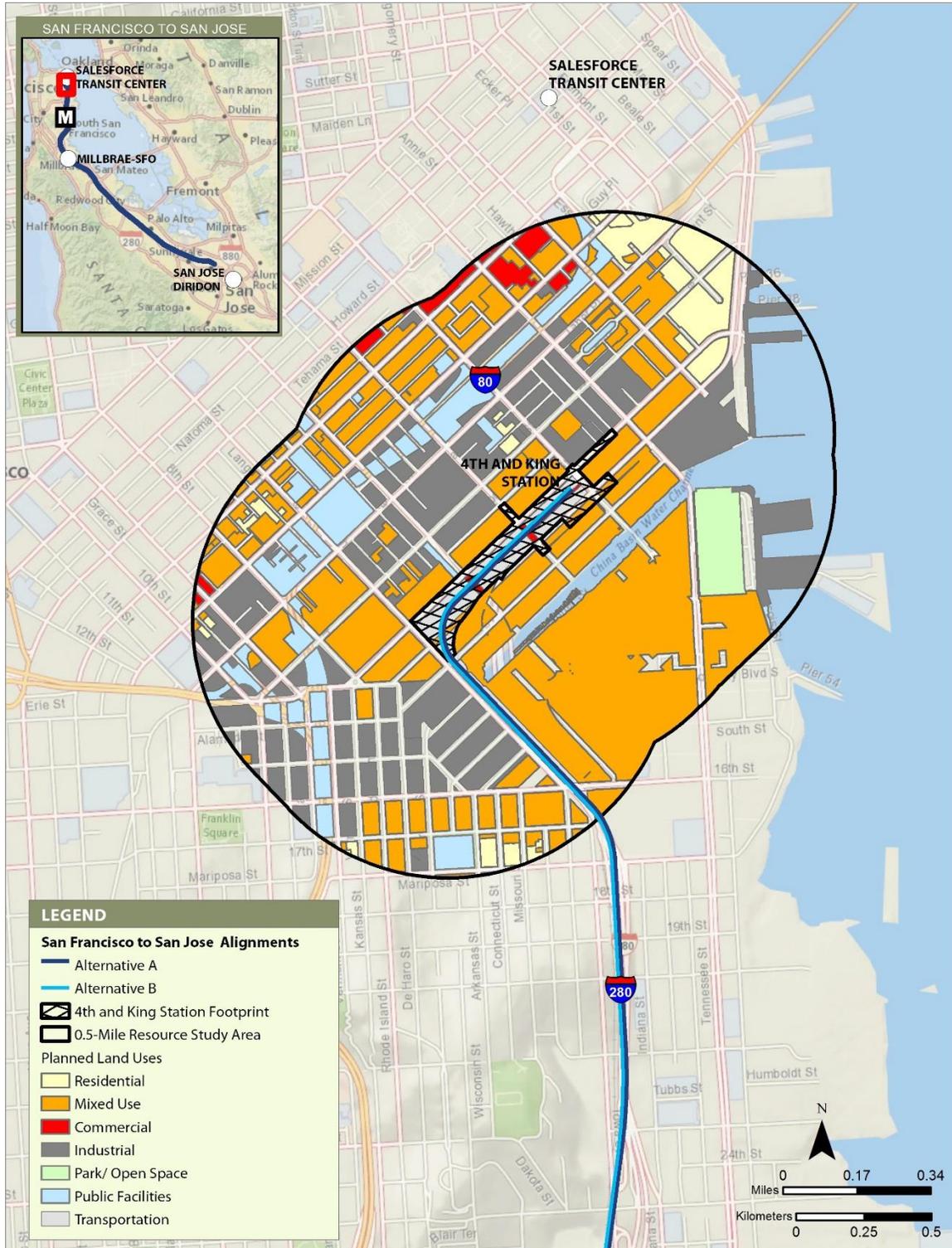


Figure 3.13-5 Planned Land Uses—4th and King Street Station Area

Brisbane Light Maintenance Facility Area

The Brisbane LMF for both alternatives would be in the Baylands area of Brisbane. This area extends from the Schlage Lock project in the north to Brisbane Lagoon in the south, and from Bayshore Boulevard in the west to US 101 in the east. The area is identified as a priority development area in *Plan Bay Area 2040*. It is one of the largest undeveloped infill sites (660 acres) in the Bay Area and is proximate to transit, which makes it an attractive site for TOD infill development opportunities (ABAG and MTC 2017). The property owner (Universal Paragon Corporation) developed the *Draft Brisbane Baylands Specific Plan* (City of Brisbane 2011), which presented potential redevelopment concepts for the site, but the draft specific plan was not adopted by the City of Brisbane. In November 2018, the City of Brisbane and the city's voters approved a General Plan Amendment that identifies the planned development of 1,800–2,200 dwelling units, up to 6.5 million square feet of commercial development, and 500,000 square feet for hotel development.

The Brisbane 2018 General Plan Amendment designates the area west and east of the Caltrain right-of-way as “Baylands Planned Development” (City of Brisbane 2018) and it identifies two planned development designations. One designation prohibits residential development and the other designation permits residential development. Figure 3.13-6 illustrates the areas of planned development. On Figure 3.13-6, the area of planned development where residential development is permitted is labeled “planned development (residential permitted)” and it is anticipated that this area would have a combination of commercial and residential uses, which is characteristic of mixed-use land uses. The area of planned development where residential development is prohibited is labeled “planned development (residential prohibited)” and it is anticipated that this area would only have commercial uses in the future. As illustrated on Figure 3.13-6, planned development (residential prohibited) is designated west and east of the Caltrain right-of-way. Planned development (residential permitted) is designated west of the Caltrain right-of-way, in the northwest corner of the Brisbane Baylands. For the purposes of this analysis, the land use designations identified in the Brisbane 2018 General Plan Amendment are used.

Heavy commercial uses are designated on the northeast portion of the site, in an area identified as the Beatty subarea. This area would accommodate the planned Recology Modernization and Expansion Project, which would expand the Recology Tunnel Avenue site by approximately 21 acres to the south and build new resource recovery facilities (City of Brisbane 2015a).

City of Brisbane policies require that 15 percent of the housing be affordable and that 25 percent of the site be open space. The developer is updating the Specific Plan and development agreement consistent with the amendment. There are also plans for a bus rapid transit (BRT) line along Geneva Avenue, relocation of the Bayshore Caltrain Station to north of a planned Geneva BRT stop, and a MUNI T-Line extension to the relocated Bayshore Caltrain Station.

Alternative A (East Brisbane Light Maintenance Facility)

Figure 3.13-6 depicts the planned land uses for and surrounding the East Brisbane LMF site, which includes the updated planned land uses, per the Brisbane 2018 General Plan Amendment enacted in November 2018. As illustrated on Figure 3.13-6, the planned land uses within the RSA include commercial, heavy commercial, residential, mixed use, parks/open space, public facilities, industrial, planned development (residential permitted), and planned development (residential prohibited). Table 3.13-3 summarizes and Figure 3.13-7 depicts the components of the East Brisbane LMF and their locations relative to planned land uses.

Table 3.13-3 East Brisbane Light Maintenance Facility Components and Planned Land Uses

Project Component	Planned Land Uses
LMF Components	
Lead tracks	Heavy commercial
	Planned development (residential prohibited)
Maintenance yard ¹	Planned development (residential prohibited)
Associated Changes	
Relocated Bayshore Station ²	Planned development (residential permitted)
	Heavy commercial
Tunnel Avenue relocation	Planned development (residential prohibited)
	Public facilities (Brisbane Fire Station)
Other	
TCEs	Heavy commercial
	Parks/open space (Brisbane Community Park)
	Planned development (residential permitted)
	Planned development (residential prohibited)
Caltrain right-of-way ³	Residential (proposed for the Schlage Lock project)
	Parks/open space (Brisbane Lagoon)

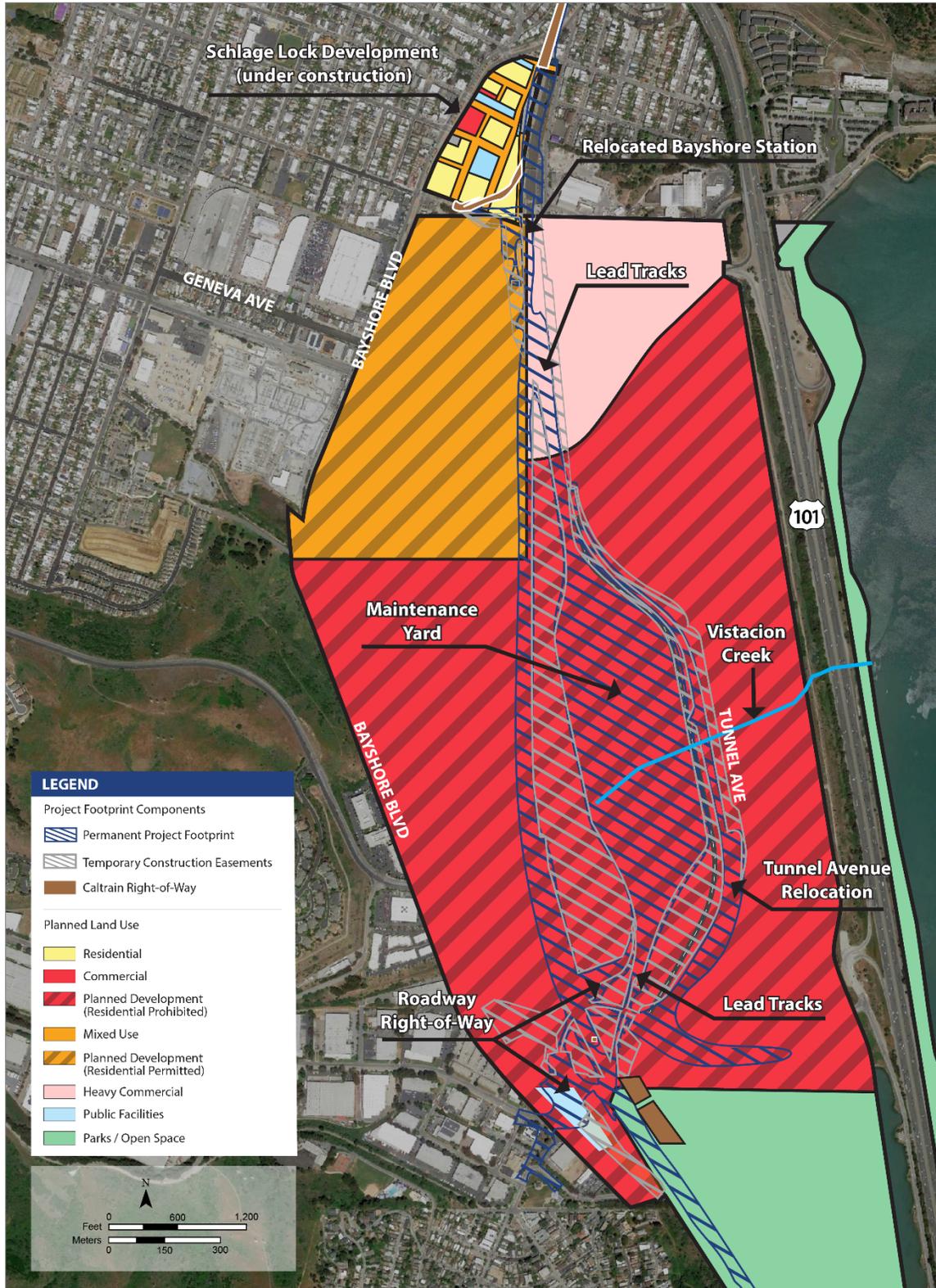
LMF = light maintenance facility

TCE = temporary construction easement

¹ The maintenance yard includes 17 yard tracks; a maintenance building containing 8 shop tracks; a power generator, sewage system, cistern, collection point, and electrical substation north of the maintenance building; and a surface parking lot east of the maintenance building.

² The footprint for the extension of Sunnyvale Avenue is included in the relocated Bayshore Station footprint because this extension would provide access to the relocated Bayshore Caltrain Station.

³ To be conservative, the Caltrain right-of-way is included in the project footprint. The Caltrain right-of-way shows up in two locations for the East Brisbane LMF; however, no project improvements are proposed within those portions of the existing Caltrain right-of-way. Thus, although the footprint shows the Caltrain right-of-way within planned residential and parks/open-space land uses, these planned land uses would not be affected.



Sources: City of Brisbane 2003, 2018

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Figure 3.13-7 Planned Land Uses—East Brisbane Light Maintenance Facility Area

In addition, the Brisbane 2018 General Plan Amendment identifies that key habitat areas, including Icehouse Hill, Brisbane Lagoon, and adjacent habitat as identified in the 2001 City Open Space Master Plan should be preserved, enhanced, and protected (City of Brisbane 2001). The Brisbane 2018 General Plan Amendment also identifies that the historic roundhouse should be protected and preserved. Improvements associated with the East Brisbane LMF would not be located at Icehouse Hill, Brisbane Lagoon, or the historic roundhouse. The East Brisbane LMF would be approximately 700 feet from Icehouse Hill, 400 feet from Brisbane Lagoon, and 2,000 feet from the historic roundhouse.

Alternative B (West Brisbane Light Maintenance Facility)

Figure 3.13-6 depicts the planned land uses for and surrounding the West Brisbane LMF site, which includes the updated planned land uses, per the Brisbane 2018 General Plan Amendment enacted in November 2018. The planned land uses in the RSA for the West Brisbane LMF are the same as described for the East Brisbane LMF because the land use RSA extends 0.5 mile from the project footprint. These planned land uses include commercial, heavy commercial, residential, mixed use, parks/open space, public facilities, industrial, planned development (residential permitted), and planned development (residential prohibited).

Table 3.13-4 summarizes and Figure 3.13-8 depicts the components of the West Brisbane LMF, and their locations relative to planned land uses. The components of the West Brisbane LMF would be in similar planned land uses as the East Brisbane LMF, with the following key exceptions:

- The northern lead tracks for the West Brisbane LMF would be on planned development (residential permitted) and planned development (residential prohibited), compared to the northern lead tracks for the East Brisbane LMF, which would be on heavy commercial and planned development (residential prohibited).
- The maintenance yard for the West Brisbane LMF would be on both planned development (residential permitted) and planned development (residential prohibited), compared to the maintenance yard for the East Brisbane LMF, which would only be on planned development (residential prohibited).

Table 3.13-4 West Brisbane Light Maintenance Facility Components and Planned Land Uses

Brisbane LMF Components and Associated Changes	Planned Land Uses
LMF Components	
Lead tracks	Planned development (residential permitted)
	Planned development (residential prohibited)
Maintenance yard ¹	Planned development (residential prohibited)
	Planned development (residential permitted)
Associated Changes	
Relocated Bayshore Station ²	Planned development (residential permitted)
	Heavy commercial
Tunnel Avenue relocation	Planned development (residential prohibited)
	Public facilities (Brisbane Fire Station)

Brisbane LMF Components and Associated Changes	Planned Land Uses
Other	
TCEs	Heavy commercial
	Parks/open space (Brisbane Community Park)
	Planned development (residential permitted)
	Planned development (residential prohibited)
Caltrain right-of-way ³	Residential (proposed for the Schlage Lock project)
	Parks/open space (Brisbane Lagoon)

LMF = light maintenance facility

TCE = temporary construction easement

¹ The maintenance yard includes 17 yard tracks; a maintenance building containing 8 shop tracks; a power generator, sewage system, cistern, collection point, and electrical substation located north of the maintenance building; and a surface parking lot east of the maintenance building.

² The footprint for the extension of Sunnyvale Avenue is included in the relocated Bayshore Caltrain Station footprint because this extension would provide access to the relocated Bayshore Caltrain Station.

³ To be conservative, the Caltrain right-of-way is included in the project footprint. The Caltrain right-of-way shows up in two locations for the West Brisbane LMF; however, no project improvements are proposed within those portions of the existing Caltrain right-of-way. Thus, although the footprint shows the Caltrain right-of-way within planned residential and parks/open-space land uses, these planned land uses would not be affected.

In addition, the Brisbane 2018 General Plan Amendment identifies that key habitat areas, including Icehouse Hill, Brisbane Lagoon, and adjacent habitat as identified in the 2001 City Open Space Master Plan should be preserved, enhanced, and protected. The Brisbane 2018 General Plan Amendment also identifies that the historic roundhouse should be protected and preserved. Improvements associated with the West Brisbane LMF would not be located at the Brisbane Lagoon or historic roundhouse. Improvements associated with the LMF would, however, be located on Icehouse Hill.

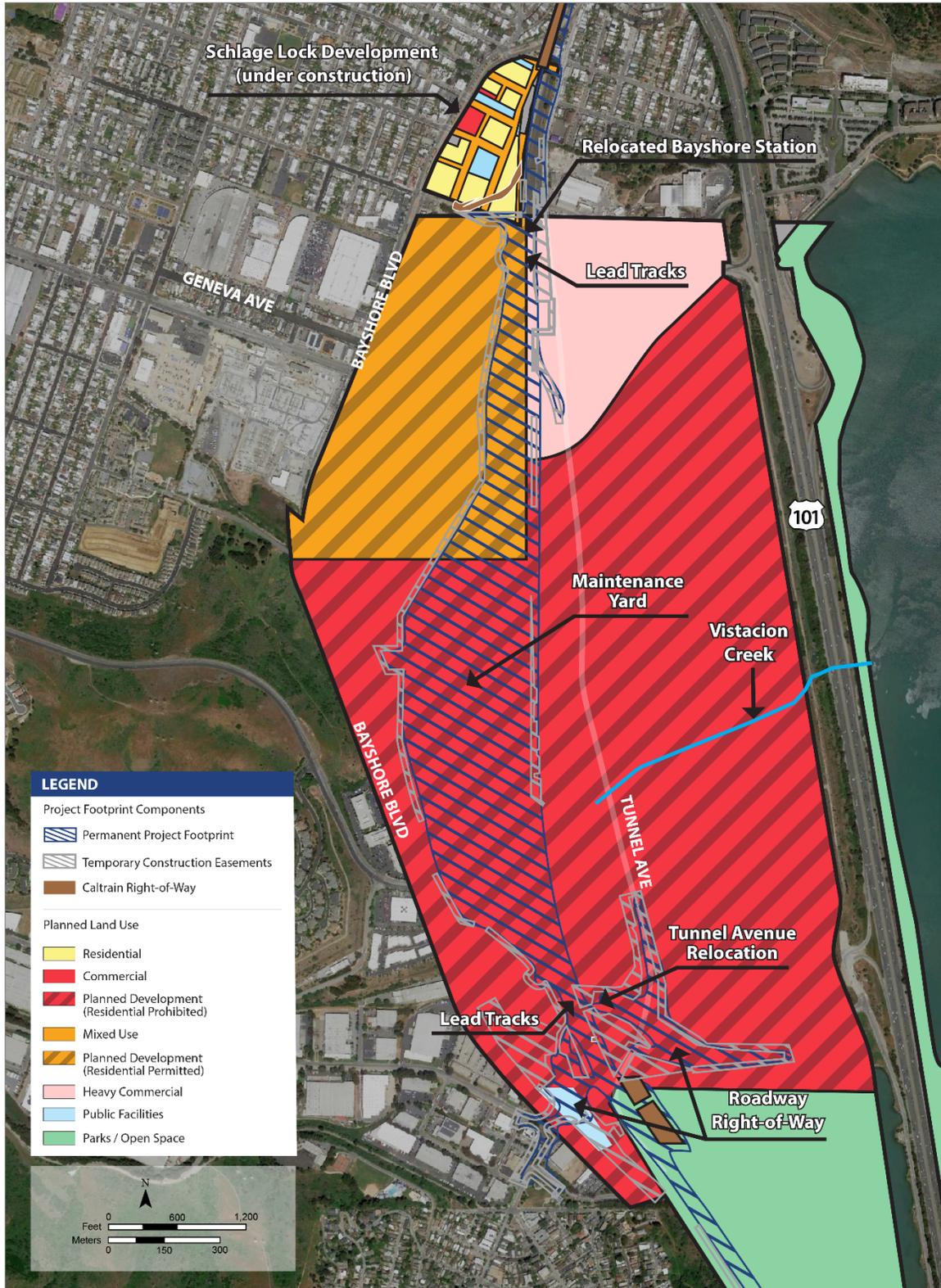
San Bruno to San Mateo Subsection

Millbrae Station

The RSA for the Millbrae Station straddles the Millbrae/Burlingame border. Both jurisdictions have adopted zoning and specific plans that affect and shape development in the station vicinity (Figure 3.13-9). The City of Millbrae's MSASP provides detailed policy direction for the area surrounding the Millbrae Station. As discussed in Section 5, Land Use Regulations and Development Standards, of the MSASP, the City of Millbrae is facilitating new development in the MSASP area to complement the existing rail facilities. The MSASP proposes higher-density mixed-use residential and commercial uses in the areas closest to the Millbrae Station, including at the location of the existing BART parking lots, to take advantage of station proximity and connect the station to adjacent neighborhoods and the downtown area. Development for this area includes land use types such as residential, office, hotel, and ground-floor retail. The plan incorporates features to encourage transit use throughout the day such as a mix of uses, high-quality pedestrian and bicycle access, narrow streets, and reduced parking requirements.

The MSASP identifies two areas of TOD adjacent to the Millbrae Station. Development applications have been submitted for two projects on these sites—the Millbrae Serra Station Project and the Gateway at Millbrae Station.

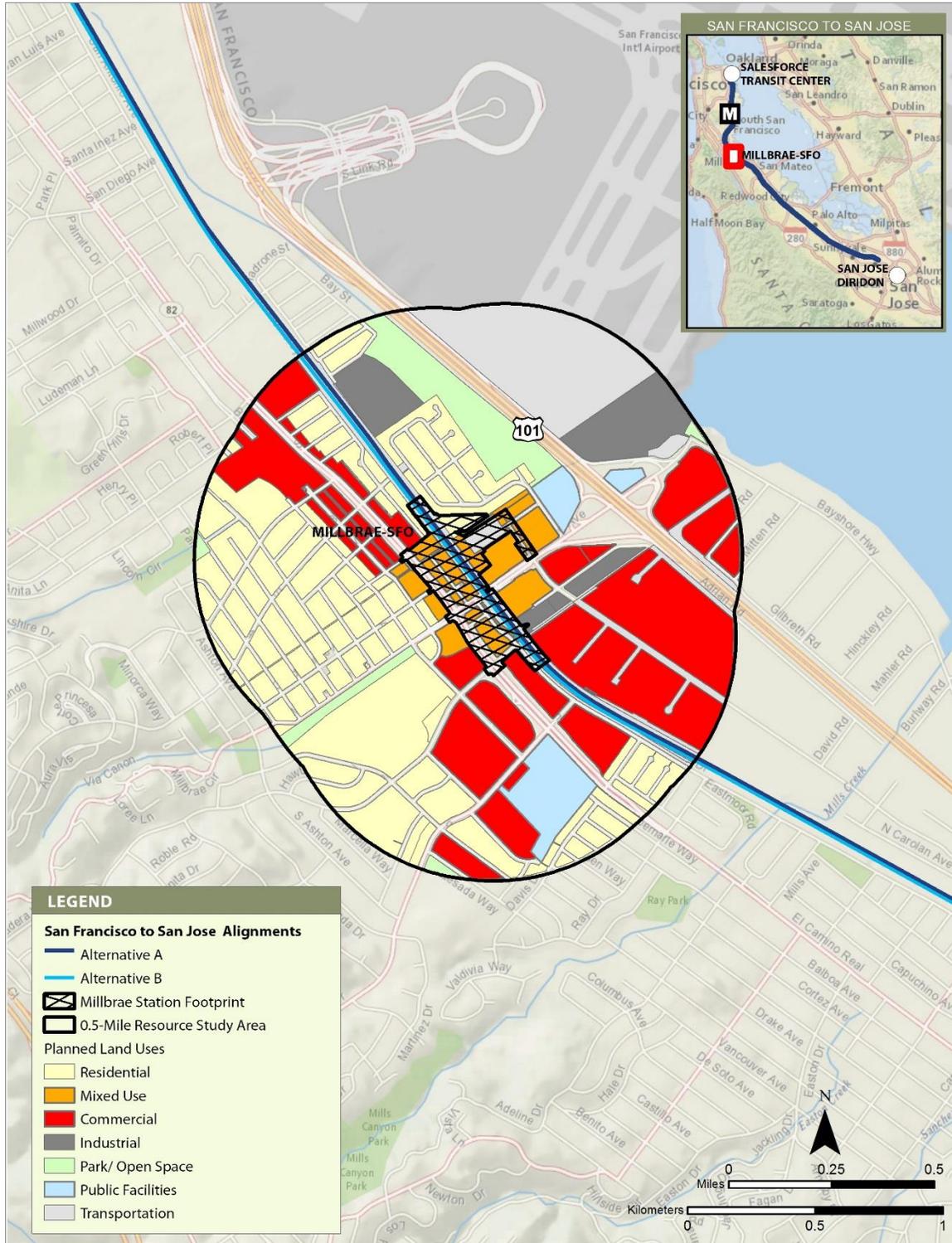
The Millbrae Serra Station Project is a planned development, which would consist of a 3.53-acre mixed-use TOD that includes a mix of residential, office, retail, and public parking uses west of the Millbrae Station along Serra Avenue on the western portion of the project and El Camino Real on the eastern portion of the project. The project would include 444 multifamily residential units, 290,100 square feet of office, and 13,200 square feet of retail space in three buildings. The proposed location of the Millbrae Serra Station Project overlaps with the proposed location of components for the proposed HSR Millbrae Station, including surface parking lots and permanent roadway right-of-way.



Sources: City of Brisbane 2003, 2018

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Figure 3.13-8 Planned Land Uses—West Brisbane Light Maintenance Facility Area



Sources: City of Millbrae 2009, 2016

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Figure 3.13-9 Planned Land Uses—Millbrae Station Area

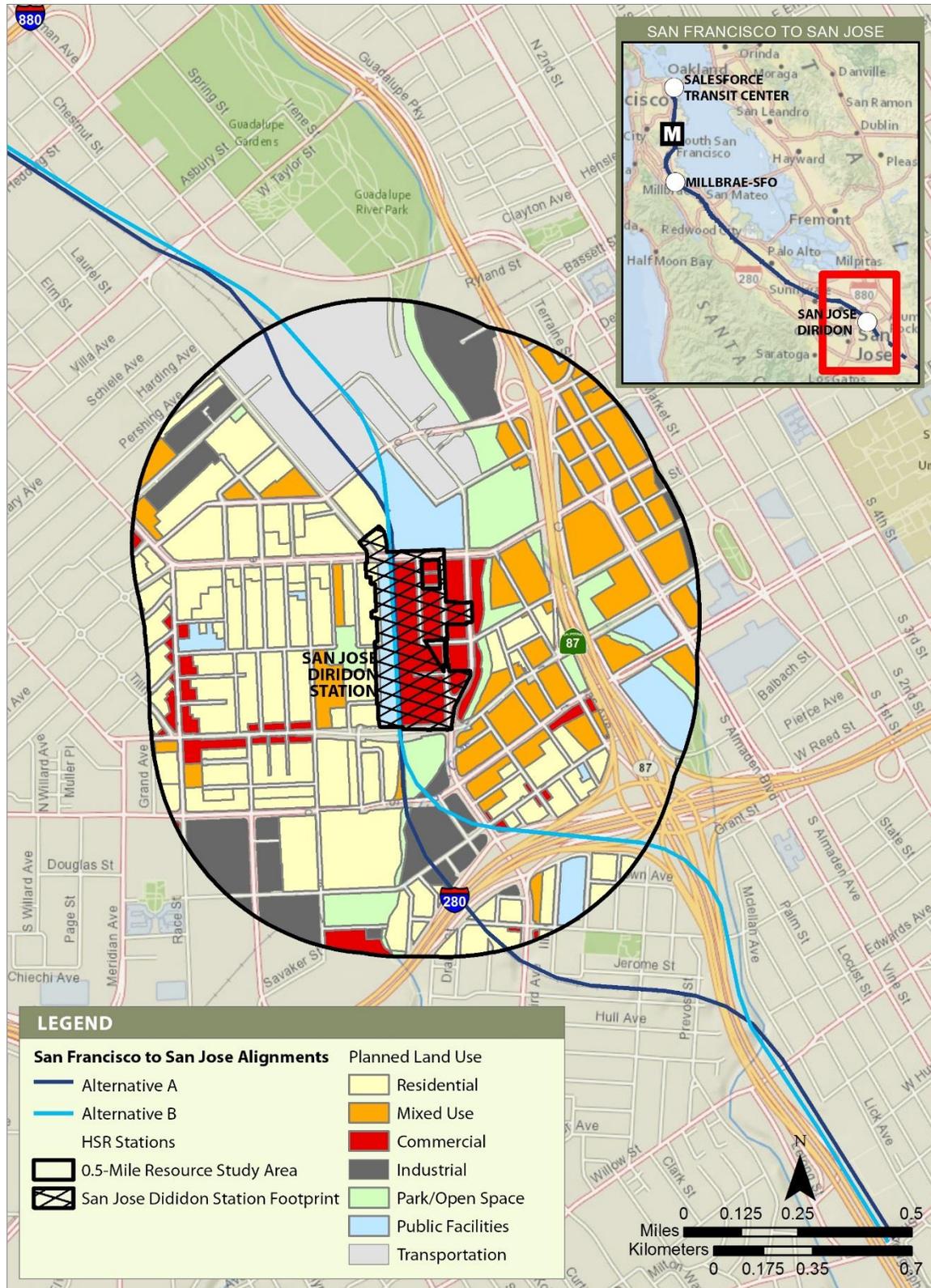
Another proposed development, the Gateway at Millbrae Station, would be on an 11-acre BART-owned site immediately east of the Millbrae Station, and would include office, retail, market-rate and affordable multifamily residential apartments and hotel uses. The Gateway at Millbrae Station Project would consist of 400 residential units, 151,583 square feet of office, 44,123 square feet of retail, and a 164-room hotel. In addition, the Gateway at Millbrae Station Project would relocate the bus intermodal facility and replace the 863 surface BART parking spaces with 392 surface parking spaces. The proposed location of the Gateway at Millbrae Station would not overlap with elements of the Millbrae HSR Station.

The North Burlingame/Rollins Road Specific Plan proposes land use changes and design improvements for the northern part of Burlingame that includes portions of the RSA. The plan envisions a mix of industrial, office, commercial, and service uses and encourages TOD and pedestrian-oriented development. As of November 2018, the Authority identified no planned development projects in the land use RSA in Burlingame for the Millbrae Station.

San Jose Diridon Station Approach Subsection

The San Jose Diridon Station is in an urban area of downtown San Jose. As discussed in Volume 2, Appendix 2-I, the *Envision San José 2040 General Plan* (San Jose General Plan) (City of San Jose 2018) and the *San Jose Diridon Station Area Plan* (City of San Jose 2014) call for land use changes in the downtown station area. As illustrated on Figure 3.13-10, the City of San Jose has adopted a zoning code that reflects the San Jose General Plan, the *Midtown Specific Plan* (City of San Jose 1992), and the *Diridon Station Area Plan*. Together, these plans envision a variety of development types that would support transit use and complement the existing high-density development near the San Jose Diridon Station. These plans, which have overlapping boundaries, call for increased density of land uses in the greater downtown area, including a mix of residential, office, commercial, business service, ballpark, open space, light industrial, and hotel uses in a pedestrian- and transit-oriented environment. The *Diridon Station Area Plan* provides for employment, retail, and entertainment uses close to the station to support transit activity and establish the area as a regionwide destination, with denser mixed-use residential and commercial uses north and south of the Diridon Station. The objective of the *Diridon Station Area Plan* is to shape a vibrant, mixed-use and transit-oriented destination that identifies San Jose as the center of Silicon Valley and attracts new residents, workers, and visitors to the station area.

The City of San Jose has adopted plans for substantial TOD near the station that would bring thousands of new jobs and residents to the area. Planned development projects in the RSA for the San Jose Diridon Station include residential uses. North of Diridon Station, a seven-story, mixed-use development is planned on Stockton Avenue. Other pending development projects include a mixed-use condominium and office project east of the station on Delmas Avenue and another planned mixed-use development with 1.04 million square feet of office/retail uses and 355 multifamily residential units on Delmas Avenue. An underground parking garage is proposed under the historic San Jose Waterworks east of San Jose Diridon Station on West Santa Clara Street. A four- or five-story, mixed-use development is planned at the intersection of Delmas and Park Avenues, and 120 condominiums are proposed for Delmas Avenue between West San Carlos Street and Auzerais Avenue south of the station (City of San Jose 2017). Furthermore, Google is planning between 6 and 8 million square feet of office space in the vicinity of the San Jose Diridon Station and the SAP Center at San Jose, a development that would expand the downtown core westward. An additional 1-million-square-foot office complex is planned by other development partners near the proposed Google complex on 5.4 acres north of the SAP Center at San Jose. Several transit expansions are also planned, including the BART Phase II extension, which would bring BART trains into the San Jose Diridon Station. In addition, the Authority, Caltrain, the City of San Jose, and the VTA have formed a partnership to initiate a Concept Plan to transform the San Jose Diridon Station.



Source: City of San Jose 2014

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Figure 3.13-10 Planned Land Uses—San Jose Diridon Station Area

For those areas in the RSA not surrounding the San Jose Diridon Station, the San Jose General Plan supports significant amounts of planned growth capacity for employment and housing. Much of this growth capacity is planned for specifically identified growth areas, which have a high degree of access to transit and other infrastructure, are near retail and other services, and are in strategic locations that support surrounding neighborhoods. These growth areas are also planned to develop at higher densities and with a mix of land uses to foster walking, bicycle, and transit use, and the formation of community identity. Significant job growth is planned through intensification of each of San Jose's employment land areas, including the Monterey Corridor and North Coyote Valley.

Summary of Planned Development Projects within Station and Light Maintenance Facility Resource Study Area

The anticipated residential, commercial, and other development growth discussed in this section represents the development that is planned in accordance with the adopted applicable community plans, precise plans, specific plans, and, in some cases, redevelopment plans. This discussion presents proposed development data to indicate the extent to which local governments have implemented their various area plans.

Table 3.13-5 summarizes the development activity planned within a 0.5-mile buffer around the stations and LMF. A full inventory of planned development projects is presented in Section 3.18, Cumulative Impacts, and in Volume 2 in Appendices 3.18-A, Cumulative Nontransportation Plans and Projects List, and 3.18-B, Cumulative Transportation Plans and Projects Lists.

Table 3.13-5 Planned Development in HSR Station and Light Maintenance Facility Areas

Station Area/LMF	Residential Units	Commercial (square feet)	Other ¹ (square feet)
4th and King Street Station	8,855	7,664,000	0
Brisbane LMF sites ²	1,800–2,200	6,500,000	500,000 ³
Millbrae Station	1,440	1,825,480	0
San Jose Diridon Station	2,588	6,387,500	8,000,000 ⁴
Total	14,683–15,083	22,376,980	8,500,000

Sources: City of Brisbane 2018; City and County of San Francisco 2019; City of Millbrae 2016; City of San Jose 2014

HSR = high-speed rail

LMF = light maintenance facility

RSA = resource study area

¹ Other land uses include a medical cannabis dispensary.

² Planned development within the RSA for the East and West Brisbane LMF is the same because the planned development east and west of the Caltrain right-of-way is within 0.5 mile of the footprint of both LMF sites.

³ Other land uses include 500,000 square feet for a hotel.

⁴ This includes the proposed Google campus of up to 8,000,000 square feet.

As shown in Table 3.13-5, the highest level of planned development activity would take place around the 4th and King Street Station. Planned housing development, which includes rental and ownership housing, assisted living units, and student housing, would be in the RSAs for stations in San Francisco, Millbrae, San Jose and the LMF RSA in Brisbane. The area around the 4th and King Street Station accounts for 59 percent of the planned housing development, while the remainder would be distributed near the San Jose Diridon Station (17 percent), the Brisbane LMF sites (15 percent), and the Millbrae Station area (10 percent). In addition, there is more than 22 million square feet of planned commercial development and more than 8 million square feet of other planned development, including a hotel (500,000 square feet) around the Brisbane LMF and the proposed Google campus (8,000,000 square feet) around the San Jose Diridon Station. Of this more than 30 million square feet of nonresidential development anticipated in the RSA, approximately 47 percent would be built around the San Jose Diridon Station, 23 percent around

the Brisbane LMF sites, 25 percent around the 4th and King Street Station, and 6 percent around the Millbrae Station.

3.13.5.3 BCDC Jurisdictional Areas

Figures 2-48 through 2-50 in Section 2.9.3, High-Speed Rail Development within the San Francisco Bay Conservation and Development Commission Jurisdictional Areas, of this Draft EIR/EIS depict the portions of the project that are in BCDC jurisdictional areas. Portions of the BCDC jurisdiction for Mission Creek, Islais Creek, the western portion of Brisbane Lagoon, Oyster Point Channel, Colma Creek, and El Zanjon Creek extend across the existing Caltrain right-of-way, which is actively being used for railway operations. The project would use existing tracks and bridges at these locations and would not require placement of fill within these BCDC jurisdictional areas or result in new development within a shoreline band or priority use area. Thus, no impacts would occur at these locations and they are not discussed further.

There are, however, two locations where the project would require fill of Bay/tidal waterways, one location where the project would result in development within a priority use area within the shoreline band, and three locations where the project would result in development on other areas within the shoreline band (outside of a priority use area).

Bay/Tidal

Portions of the maintenance yard and the Tunnel Avenue realignment for the East Brisbane LMF under Alternative A would include fill and other project improvements within a portion of the Bay/tidal waterway of Visitacion Creek. Alternative B would not require filling of the Bay/tidal waterway of Visitacion Creek. Widening of the Guadalupe Valley Creek bridge under both project alternatives would require fill of a portion of the Bay/tidal waterway of Guadalupe Valley Creek.

Shoreline Band

Priority Use Area within Shoreline Band

A portion of the Lagoon Road realignment would be in a priority use area in the shoreline band of Brisbane Lagoon. BCDC has designated on Bay Plan maps those areas that should be reserved for priority land uses on the Bay shoreline (BCDC 2019). This mapped priority use area is identified for “waterfront park, beach” use.

Other Areas within the Shoreline Band

Portions of the maintenance yard and the Tunnel Avenue realignment for the East Brisbane LMF under Alternative A would result in development within the shoreline band of Visitacion Creek. A portion of the track alignment and Lagoon Road realignment in Brisbane would require project improvements within the shoreline band of the northern portion of Brisbane Lagoon under both project alternatives. The relocation of the southern terminus of the new Tunnel Avenue overpass to the Bayshore Boulevard/Valley Drive intersection and the horizontal shifting of tracks, overhead contact system (OCS) poles, and wires would introduce project improvements within the shoreline band of Guadalupe Valley Creek under both project alternatives.

3.13.5.4 Planned Population Growth

A comprehensive analysis of regional growth is presented in Section 3.17. Table 3.13-6 shows the RSA three-county population estimates for 2015 and projections for 2040. The land use plans of San Francisco, San Mateo, and Santa Clara Counties encourage infill and higher-density development in urban areas and concentration of uses around transit corridors to accommodate future population growth and provide more modal choices for residents and workers.

Table 3.13-6 Project Population Growth, 2015–2040

Geographic Area	Population in 2015	Population in 2040	Percent Change 2015–2040	Annual Average Growth Rate 2015–2040
San Francisco County	857,508	1,027,004	19.8%	0.7%
San Mateo County	759,155	874,626	15.2%	0.6%
Santa Clara County	1,903,974	2,331,887	22.5%	0.8%
Region ¹	3,520,637	4,233,517	20.2%	0.7%
California	38,907,642	47,233,240	21.4%	0.8%

Sources: CDOF 2014, 2016

¹ Regional entails the three counties that the project crosses.

3.13.6 Environmental Consequences

3.13.6.1 Overview

This section discusses the potential impacts related to station planning, land use, and development that could result from implementing the project alternatives. The discussion considers the potential for the project to: (1) alter land use patterns by introducing incompatible land uses or increase development intensity beyond planned levels and (2) induce population growth beyond planned levels. Each topic area discusses potential impacts from the No Project Alternative and the project alternatives. Refer to Volume 2, Appendix 2-I for a description of applicable land use plans and policies and Appendix 2-J for a discussion of inconsistencies with applicable policies. Refer to Sections 3.2, 3.3, 3.4, 3.12, 3.14, and 3.15 for impacts and mitigation measures related to construction transportation; air quality; noise; the displacement of residences, businesses, and community facilities; the acquisition of park land; and impacts on visual character and quality associated with project implementation.

3.13.6.2 Alteration of Land Use Patterns

Construction of the project alternatives would result in temporary and permanent changes to land use patterns. Existing areas of residential, commercial, and industrial uses would be temporarily or permanently acquired for construction of the project alternatives. Areas used for TCEs would revert to their previous uses after construction of the project is complete and the land is returned to its former condition.

Land permanently acquired would not be returned to its former use but would be permanently converted to transportation-related uses. Land use patterns could be permanently altered if the project introduces a use incompatible with adjacent existing land uses or with the zoning designations of adjacent uses.

No Project Impacts

As discussed in Chapter 2, Alternatives, and Section 3.17, the population in the Bay Area is expected to grow substantially by 2040. Development in the region to accommodate the anticipated population and employment increases would continue under the No Project Alternative, resulting in associated direct temporary and permanent conversion of existing land uses. The future condition under the No Project Alternative represents local and regional development projects that are expected to be implemented in the RSA by 2040 regardless of whether the Project Section is built. Without the HSR project, the forecasted 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 4 airport runways) would be needed to achieve equivalent capacity to HSR and accommodate the increased pressure on transportation infrastructure from increased population growth (Authority 2012). Section 3.18 identifies planned and other reasonably foreseeable future projects

anticipated to be built in the region to accommodate the projected growth in the area, including shopping centers, industrial parks, transportation projects, and residential developments.

Under the No Project Alternative, development trends are anticipated to continue, leading to impacts from conversion of existing land uses and altered land use patterns. Existing land uses would be converted for residential, commercial, and industrial development, as well as for transportation infrastructure, to accommodate future growth, thereby placing potential pressures on existing land uses not subject to conversion. Most of the planned and other reasonably foreseeable future residential or mixed-use projects rely on infill development or redevelopment of underutilized property, which minimizes the conversion of existing land uses and altered land use patterns. Some of these projects include 75 Howard Street in San Francisco, 406-418 San Mateo Avenue in San Bruno, and 1305 El Camino Real in Redwood City. Transportation projects are more likely to convert land uses or alter land use patterns than infill development, such as the SR 92 Project, which would widen SR 92 and add a passing lane from US 101 to I-280, improvements to the Dumbarton Bridge, US 101 Millbrae Avenue Bike/Pedestrian Bridge, and widening Montague Expressway and San Tomas Expressway.

Many of the projects included in the No Project Alternative also encourage TOD, which would increase the density of residential and commercial development around transit hubs. The City and County of San Francisco has adopted a zoning code that would support transit use and complement the existing high-density urban environment near the 4th and King Street Station. The City and County of San Francisco approved the *Central SoMa Plan & Implementation Strategy* in December 2018, which encourages residential and commercial development in an area just north of the 4th and King Street Station (City and County of San Francisco 2018b). The area in which the Brisbane LMF would be located, as well as surrounding areas, are planned for TOD. The Schlage Lock project is under construction northwest of the site and will provide 1,679 residential units and 46,700 square feet of retail proximate to the LMF site. The following proposed transportation projects are in the conceptual planning phase or are undergoing a feasibility study: the Geneva-Harney BRT line along Geneva Avenue, relocation of the Bayshore Caltrain Station to just north of the Geneva BRT terminus, the US 101/Candlestick Point interchange (also known as the Geneva Avenue extension and interchange), and a MUNI T-Line extension to the relocated Bayshore Caltrain Station. The City of Millbrae's approved MSASP provides detailed policy direction for the area surrounding the Millbrae Caltrain/BART Station. The MSASP proposes higher-density housing, retail, restaurant, office, hotel, and entertainment in a mixed-use setting, and connecting the station to adjacent neighborhoods and downtown. The plan is pedestrian and transit oriented and is designed to complement the nearby Millbrae Caltrain/BART Station. The *Diridon Station Area Plan* (City of San Jose 2014) provides guidance for developing a broad mix of TOD surrounding the station and anticipates pedestrian, bicycle, open space, and street connections from the greater downtown area and surrounding neighborhoods. Under the No Project Alternative, TOD could lead to infill development, increased density, reduced parking requirements, and better access to transit.

All these planned developments have been required or will be required to undergo design review and individual project approval, during which time the decision makers will determine consistency with applicable land use plans and policies, including zoning, and compatibility with adjacent land uses. Although individual projects need not be consistent with each and every policy of applicable land use plans, jurisdictions require consistency with the general vision of the land use plans and most of its policies. Projects that are not consistent with land use plans would require an amendment to the land use plan in order to proceed. Planned development that would proceed through 2040 with or without implementation of the project would be generally consistent with plans and zoning. As such, this planned development would be compatible with adjacent land uses, and would therefore not substantially alter land use patterns.

Project Impacts

Construction Impacts

Construction of the project alternatives would consist of track modifications, relocation of OCS poles, and installation of communication radio towers, four-quadrant gates at at-grade crossings,

and perimeter fencing along the right-of-way. Construction would also involve roadway modifications; Caltrain station modifications; modifications to or construction of new structures; construction of the new Brisbane LMF; additional passing tracks under Alternative B; and construction of a viaduct (beginning at either I-880 or Scott Boulevard) under Alternative B. Activities associated with building this infrastructure include establishing equipment and materials storage areas close to construction sites; demolishing existing structures to expand existing station areas; clearing and grubbing; handling, storing, hauling, excavating, and placing fill; possible pile driving; and building bridges, road modifications, and utility relocations. Section 2.10, Construction Plan, describes construction activities in more detail.

Impact LU#1 and LU#2 identify the temporary impacts due to construction of the project and Impacts LU#3, LU#4, and LU#5 identify the permanent impacts due to construction of the project. Both project alternatives would require acquisition of different amounts and types of land for permanent conversion to transportation use. Table 3.13-7 provides an overview of the project elements in each jurisdiction that would require permanent right-of-way acquisition. Some amount of permanent right-of-way acquisition would be required in 12 (Alternative A) or 13 (Alternative B) of the 17 cities and communities through which the Project Section travels. Permanent right-of-way acquisition would be required for track modifications, permanent easements for utilities, installation of communication radio towers, roadway and station modifications, construction of the Brisbane LMF, additional passing tracks under Alternative B, and a viaduct beginning at either I-880 or Scott Boulevard under Alternative B.

Table 3.13-7 Permanent Right-of-Way Acquisition by City/Community and Project Element

City/Community	Alternative A	Alternative B
San Francisco to South San Francisco Subsection		
San Francisco	4th and King Street Station; communication radio towers; Bayshore Station modifications ^{1,2}	4th and King Street Station; communication radio towers; Bayshore Station modifications ^{1,2}
Brisbane	Bayshore Station modifications; track modifications; East Brisbane LMF; Tunnel Avenue realignment and overpass; communication radio towers ¹	Bayshore Station modifications; track modifications; West Brisbane LMF; Tunnel Avenue realignment and overpass; communication radio towers ¹
South San Francisco	N/A	N/A
San Bruno to San Mateo Subsection		
San Bruno	N/A	N/A
Unincorporated San Mateo County	Communication radio towers	Communication radio towers
Millbrae	Millbrae Station; track modifications; roadway relocation ¹	Millbrae Station; track modifications; roadway relocation ¹
Burlingame	N/A	N/A
San Mateo (north of 9th Avenue)	Communication radio towers	Communication radio towers
San Mateo to Palo Alto Subsection		
San Mateo (south of 9th Avenue)	Communication radio towers	Communication radio towers; passing tracks
Belmont	Communication radio towers	Communication radio towers; passing tracks; Belmont Station modifications ³
San Carlos	Communication radio towers	Communication radio towers; passing tracks; San Carlos Station modifications ³

City/Community	Alternative A	Alternative B
Redwood City	N/A	Passing tracks
Unincorporated San Mateo County (North Fair Oaks)	N/A	N/A
Atherton	N/A	N/A
Menlo Park	Communication radio towers	Communication radio towers
Palo Alto	Communication radio towers	Communication radio towers
Mountain View to Santa Clara Subsection		
Mountain View	Communication radio towers	Communication radio towers
Sunnyvale	Communication radio towers	Communication radio towers
Santa Clara	N/A	N/A
San Jose Diridon Station Approach Subsection		
Santa Clara	N/A	New dedicated HSR track; roadway modifications; automatic train control facilities
San Jose	Track modification; new UPRR track; College Park Station modifications; roadway modifications; San Jose Diridon Station	New dedicated HSR track on viaduct; Caltrain/UPRR track relocation; College Park Station modifications; roadway modifications; and TPSS

Sources: Authority 2019a, 2019b

HSR = high-speed rail

LMF = light maintenance facility

N/A = not applicable

TPSS = traction power substation

UPRR = Union Pacific Railroad

¹ The improvements associated with the 4th and King Street Station and Millbrae Station are discussed in Impact LU#4.

² The improvements associated with the Bayshore Station modifications, East Brisbane LMF, West Brisbane LMF, and Tunnel Avenue realignment and overpass are discussed in Impact LU#5.

³ The Belmont Station and the San Carlos Station modifications are associated with the passing tracks and are analyzed in Impact LU#3.

Impact LU#3 focuses on the impacts associated with trackwork, including the passing tracks and viaduct under Alternative B, installation of communication radio towers, and permanent easements for utilities. The 4th and King Street Station, Millbrae Station, San Jose Diridon Station, Brisbane LMF, Bayshore Station modifications, and Tunnel Avenue realignment and overpass are the major project elements outside the Caltrain right-of-way. Therefore, the impacts associated with these project elements are discussed separately from the impacts associated with trackwork. The impacts associated with the permanent alteration of land use patterns from the 4th and King Street Station, Millbrae Station, and San Jose Diridon Station are discussed in Impact LU#4. The impacts associated with the permanent alteration of land use patterns from the Brisbane LMF, Bayshore Station modifications, and Tunnel Avenue realignment and overpass are discussed in Impact LU#5.

Impact LU#1: Temporary Alteration of Land Use Patterns from Land Use Conversion and Introduction of Incompatible Land Uses

Along much of the alignment, construction of the project alternatives would occur within the existing Caltrain right-of-way. Construction activities such as equipment staging, vegetation clearance, minor horizontal or vertical track modifications, most OCS pole relocations, utility relocations, modifications to existing Caltrain structures, and modifications to existing station platforms would be performed primarily within the Caltrain right-of-way. Some of these construction activities would be performed by “on-track” equipment that would operate along the existing Caltrain tracks as it adjusts track alignment and ballast, while other types of construction

would require construction crews and vehicles to travel to work sites and staging locations established temporarily within the existing Caltrain right-of-way.

TCEs outside the Caltrain right-of-way would be required in certain areas along the alignment for construction of major track realignments, station modifications, construction of the Brisbane LMF, roadway modifications, construction of passing tracks (under Alternative B), construction of viaducts (for Alternative B), and installation of communication radio towers and four-quadrant gates. Table 3.13-8 summarizes the extent of these temporary uses by subsection and by project element. Alternative A would require 112.6 acres of temporary use of land outside the right-of-way, compared to 99.8 acres for Alternative B (Viaduct to I-880) and 117.8 acres for Alternative B (Viaduct to Scott Boulevard). The main differences in TCEs between Alternatives A and B is due to the differences between the East and West Brisbane LMF, and due to the additional project elements that would be built under Alternative B (passing track; viaduct).

The East Brisbane LMF (Alternative A) would require a larger area for temporary uses than the West Brisbane LMF (Alternative B), as explained in further detail under the San Francisco to South San Francisco Subsection subheading. Most of the land subject to temporary use for construction of the project has existing vacant and industrial land uses. In addition, Alternative B would require more TCEs than Alternative A for installation of the passing tracks and the viaducts in the San Jose Diridon Station Approach Subsection.

Land needed for TCEs would be leased from the landowner, taken out of its existing use, and used temporarily for construction. The duration of the temporary use depends on the type of construction activity—the installation of four-quadrant gates would likely be completed within 2 to 4 weeks, while construction of HSR stations, the Brisbane LMF, or roadway modifications would require 2 to 4.5 years for construction at any given location. Once construction activities are complete, the Authority’s contractor would restore lands temporarily used for construction to pre-construction conditions (LU-IAMF#3). Consequently, land use conversions would be temporary and would be restored to pre-construction conditions once construction has ceased, preventing adjacent incompatible land uses leading to alteration of land use patterns.

Table 3.13-8 identifies the area of existing land uses outside of the right-of-way for Alternatives A and B. As shown in Table 3.13-8, all subsections under both Alternatives A and B would require temporary land use conversions for project construction. The largest amount of temporary land use would be associated with construction of the East or West Brisbane LMF in the San Francisco to South San Francisco Subsection, expansion of the Millbrae Station in the San Bruno to San Mateo Subsection, construction of the passing track in the San Mateo to Palo Alto Subsection under Alternative B, and construction of the viaduct in the San Jose Diridon Station Approach Subsection under Alternative B.

Table 3.13-8 Temporary Use of Land outside the Right-of-Way for the Project Alternatives

Project Component	Existing Land Use Category (acres)									
	Residential	Mixed Use	Commercial	Industrial	Planned Development ¹	Public Facilities	Parks/Open Space	Transportation	Vacant	Total
Alternative A										
San Francisco to South San Francisco Subsection										
Track alignment	0.1	<0.1	0.2	0.9	0	0.8	0	<0.1	<0.1	2.1
4th and King Street Station	0	1.7	0	0	0	<0.1	0	0	0	1.7
East Brisbane LMF	0	<0.1	0.3	20.5	0.2	0.3	<0.1	1.0	51.9	74.3
San Bruno to San Mateo Subsection										
Track alignment	0.3	0	1.4	0	0	<0.1	0	0	0	1.7
Millbrae Station	<0.1	0.1	3.2	3.2	0	0	0	1.5	0	8.0
San Mateo to Palo Alto Subsection										
Track alignment	0.7	0.3	0.2	0.1	0	0.2	<0.1	<0.1	<0.1	1.5
Mountain View to Santa Clara Subsection										
Track alignment	0.4	0.6	<0.1	0.4	0	<0.1	0	0	0	1.4
San Jose Diridon Station Approach Subsection										
TCE/Staging	0.4	0	0	9.3	0	0.1	0	1.5	0	11.3
San Jose Diridon Station	0.6	0	8.2	0	0	1.8	0	0	0	10.6
Totals	2.5	2.7	13.5	34.4	0.2	3.2	<0.1	4.0	51.9	112.6
Alternative B										
San Francisco to South San Francisco Subsection										
Track alignment	0.1	<0.1	0.2	0.9	0	0.8	0	<0.1	<0.1	2.1
4th and King Street Station	0	1.7	0	0	0	<0.1	0	0	0	1.7
West Brisbane LMF	0	<0.1	0.3	4.0	0.1	0.3	<0.1	0.3	13.5	18.5

Project Component	Existing Land Use Category (acres)									
	Residential	Mixed Use	Commercial	Industrial	Planned Development ¹	Public Facilities	Parks/Open Space	Transportation	Vacant	Total
San Bruno to San Mateo Subsection										
Track alignment	0.3	0	1.4	0	0	<0.1	0	0	0	1.7
Millbrae Station	<0.1	0.1	3.2	3.2	0	0	0	1.5	0	8.0
San Mateo to Palo Alto Subsection										
Track alignment	0.7	<0.1	<0.1	<0.1	0	0.2	0	<0.1	<0.1	0.9
Passing tracks	0.1	3.9	4.0	0.1	0	0	<0.1	0.4	0.2	8.9
Mountain View to Santa Clara Subsection										
Track alignment	0.4	0.6	<0.1	0.4	0	<0.1	0	0	0	1.4
San Jose Diridon Station Approach Subsection (Viaduct to I-880)										
TCE/Staging	1.4	0.3	0.2	10.2	0	10.1	4.3	21.4	0	47.9
San Jose Diridon Station	0.3	0	8.4	0	0	0	0	0	0	8.7
San Jose Diridon Station Approach Subsection (Viaduct to Scott Boulevard)										
TCE/Staging	2.9	0.5	0.1	23.3	0	9.2	5.2	25.5	0	66.7
San Jose Diridon Station	0.3	0	7.6	0	0	0	0	0	0	7.9
Totals Alternative B (Viaduct to I-880)	3.3	6.6	17.7	18.8	0.1	11.4	4.3	23.6	13.7	99.8
Totals Alternative B (Viaduct to Scott Boulevard)	4.8	6.8	16.8	31.9	0.1	10.5	5.2	27.7	13.7	117.8

Sources: Authority 2019a, 2019b

I- = Interstate

LMF = light maintenance facility

TCE = temporary construction easement

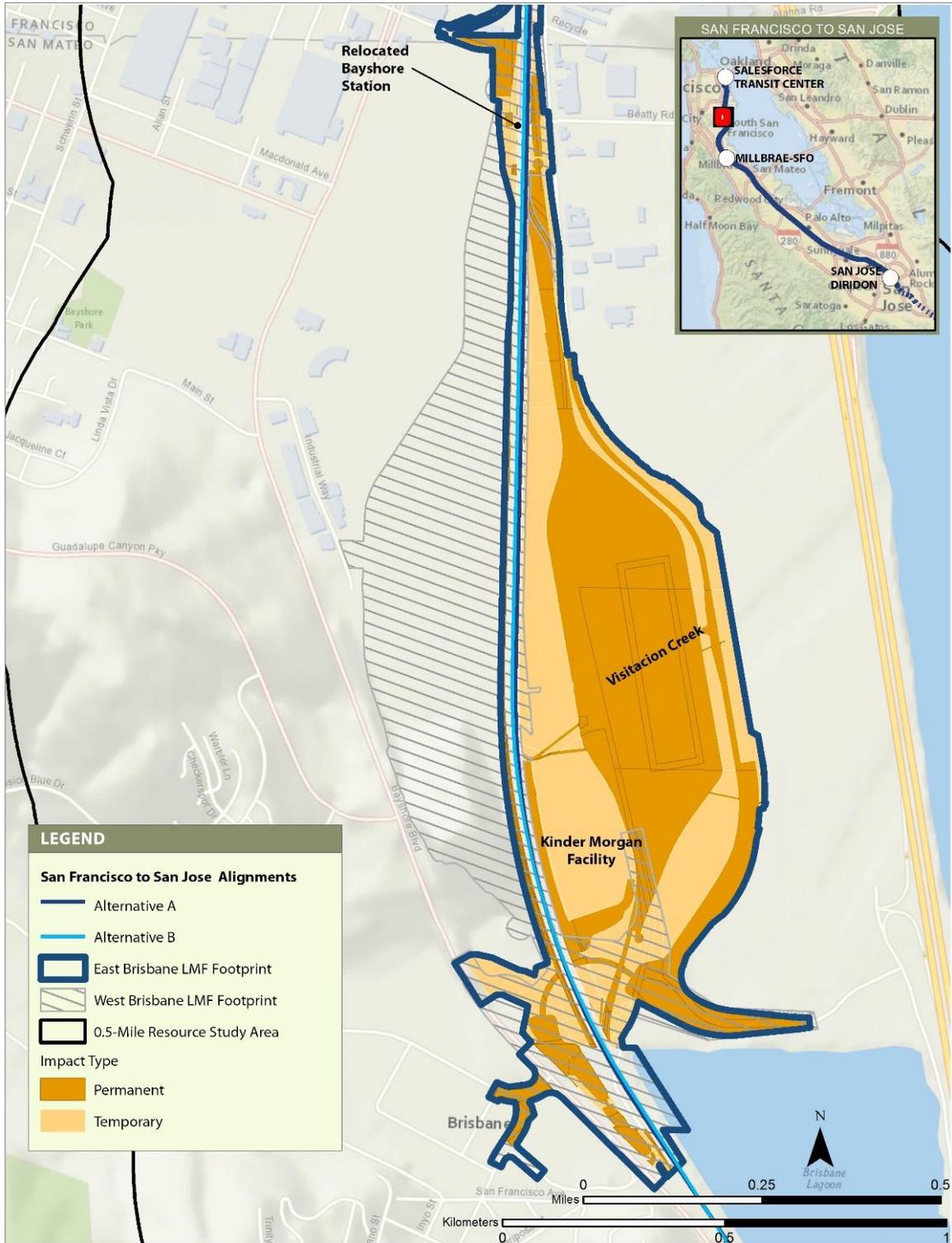
Land use impact calculations exclude the existing Caltrain right-of-way, with exception of the San Jose Diridon Station Approach Subsection.

San Francisco to South San Francisco Subsection

Minor roadway improvements at the 4th and King Street Station, construction of the East or West Brisbane LMF, reconstruction of the Tunnel Avenue overpass, installation of four-quadrant gates at existing at-grade crossings, and installation of communication radio towers would require the temporary use of land outside the Caltrain right-of-way. Trackwork for both alternatives would temporarily use 2.1 acres of primarily industrial, commercial, public facilities, and residential land uses, and a small portion of mixed-use, transportation, and vacant land uses. Construction of the 4th and King Street Station would require the temporary use of 1.7 acres of mixed-use areas immediately surrounding the existing station under both alternatives. These TCEs would not directly affect any structures; rather, the TCEs would be located in existing roadways, shoulders of the existing railroad track, parking lots, backyards, or vacant areas adjacent to residential, commercial, and mixed-use structures. The backyards of two residential structures would be used for TCEs for both project alternatives. The Authority would implement project features to restore areas used for construction (LU-IAMF#3). Furthermore, the Authority would provide safe access for individuals to residences, commercial buildings, and other structures during construction (SS-IAMF#1, TR-IAMF#2). The TCEs would therefore not alter existing land use patterns because they would not physically affect structures or prevent access to the existing uses.

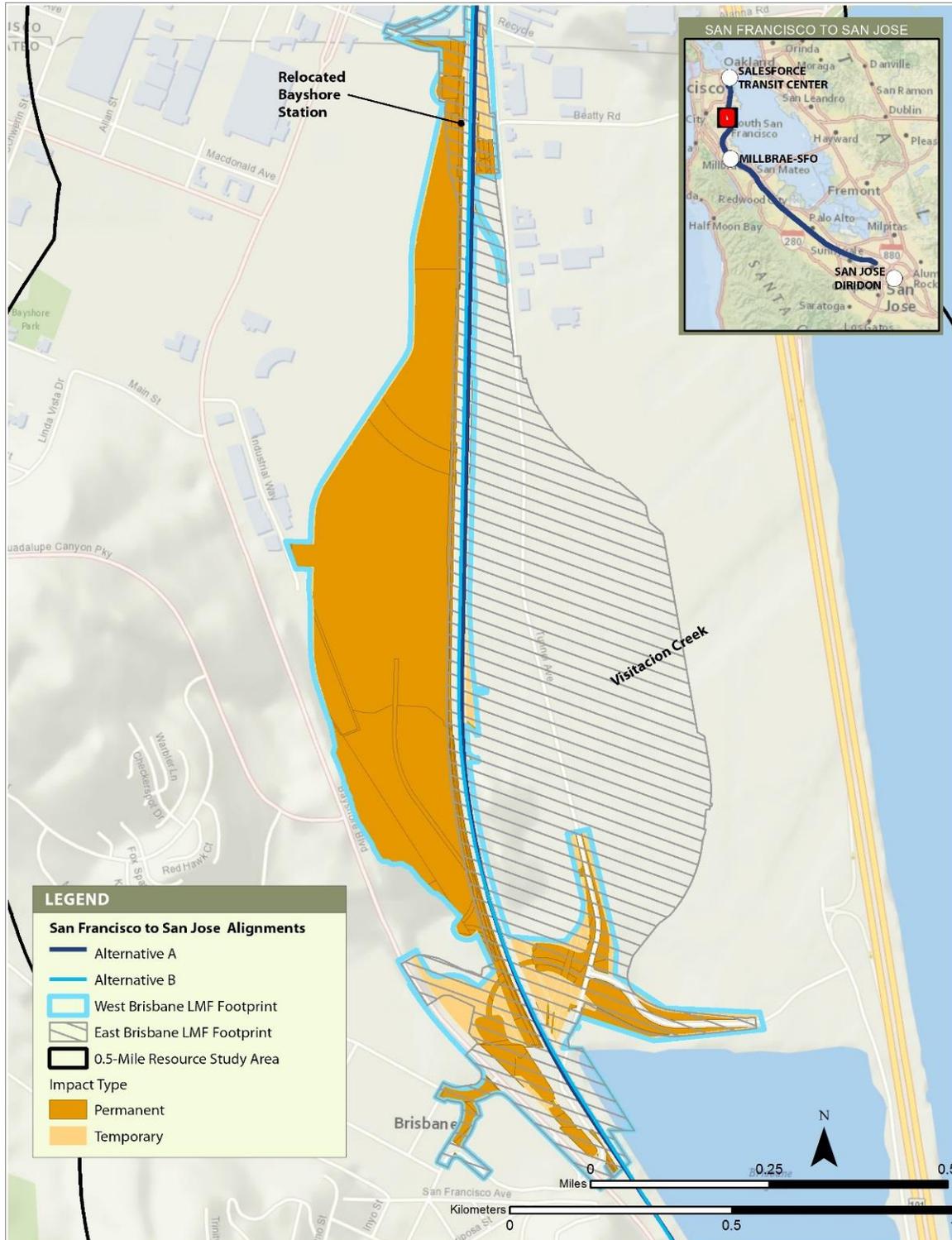
The East Brisbane LMF (Alternative A) and the realignment of Tunnel Avenue east of the LMF would require temporary use of 74.3 acres of land (66 percent of the total temporary land use required under Alternative A), while the West Brisbane LMF (Alternative B) would require temporary use of 18.5 acres of land (16 percent of the total temporary land use required under Alternative B [Viaduct to Scott Boulevard] and 19 percent of the total temporary land use required under Alternative B [Viaduct to I-880]). The temporary use of land is greater for Alternative A because avoidance of the SFPP Kinder Morgan Brisbane Terminal at the southern end of the East Brisbane LMF requires that the permanent footprint of the LMF be offset several hundred feet east of the existing Caltrain alignment. The resulting TCE would be between the Caltrain right-of-way and the western edge of the East Brisbane LMF on primarily vacant land (see Figure 3.13-11).² In addition, Alternative A requires the realignment of Tunnel Avenue to the east of the East Brisbane LMF, which requires more TCEs. The TCEs for the West Brisbane LMF would primarily be needed for the Tunnel Avenue realignment. Other than those TCEs, the area where permanent impacts would occur would also be used during construction, which would avoid the need for additional TCEs (see Figure 3.13-12). The lands for the TCEs would be temporarily used for establishing equipment and materials storage areas close to construction sites and building the LMF. Under both alternatives, most of these lands are vacant or used for industrial purposes. The TCEs at the LMF sites would not substantially alter the land use pattern because most of this land has existing vacant or industrial uses, consistent with the proposed LMF use.

² The area required for TCEs (74.3 acres) for the East Brisbane LMF is a conservative estimate of the area required to build the East Brisbane LMF; therefore, it is likely that the entire area would not actually be used. For example, the Kinder Morgan Facility, the location of which is mapped on Figure 3.13-11, is included as a part of the TCE; however, the project would not actually require the use of that facility.



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Figure 3.13-11 Temporary and Permanent Project Footprint—East Brisbane Light Maintenance Facility Area



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Figure 3.13-12 Temporary and Permanent Project Footprint—West Brisbane Light Maintenance Facility Area

San Bruno to San Mateo Subsection

Trackwork, including track modifications, roadway relocations, installing four-quadrant gates at existing at-grade crossings, and installing communication radio towers, would require the temporary use of 1.7 acres of land outside the Caltrain right-of-way under both alternatives. These TCEs would primarily affect areas with existing mixed-use land uses.

Modifications to the Millbrae Station to accommodate HSR service would require the temporary use of 8.0 acres of land outside the Caltrain right-of-way under both alternatives. These areas are primarily commercial, transportation, industrial, and vacant land uses, with some small amount of residential (less than 0.1 acre) and mixed-use land uses (0.1 acre). TCEs would be required east and west of the Millbrae Station, and would extend between El Camino Real on the west, Rollins Road on the east, Victoria Avenue on the north, and Murchinson Drive on the south. West of the station, land would be temporarily used for establishing equipment and materials storage areas close to construction sites, construction of a new HSR station concourse and platforms, construction of overhead circulation elements between the new station and platforms, extension of California Drive to Victoria Avenue, and other minor roadway modifications. Northeast of the station, a TCE would be on a vacant property for equipment and materials storage, and another TCE would extend through the first level of the BART parking structure, which would be reconfigured to accommodate passenger pick-up and drop-off facilities.

These TCEs would not directly affect any structures, because they would be on roadways, parking lots, shoulders of the existing railroad track, backyards, or vacant areas adjacent to structures. The backyards of approximately 20 residential properties would be used for TCEs for Alternatives A and B within this subsection. The Authority would implement project features to restore areas used for construction (LU-IAMF#3) and also provide safe access for individuals to residences, commercial buildings, and other structures during construction (SS-IAMF#1, TR-IAMF#2). The TCEs would therefore not alter existing land use patterns because they would not physically affect any structures or prevent access to the existing uses.

San Mateo to Palo Alto Subsection

Construction of the passing track under Alternative B would require a greater TCE than construction under Alternative A, which would entail trackwork along the Caltrain right-of-way. While Alternative A would require the temporary use of 1.5 acres of land, Alternative B would require the use of 9.8 acres for construction of the track and for the passing track through San Mateo, Belmont, and San Carlos. The passing track would comprise 10 percent of the total temporary land use required under Alternative B (Viaduct to I-880) and 8 percent under Alternative B (Viaduct to Scott Boulevard). The TCE for the passing track would typically consist of a 15-foot-wide strip of land on both sides of the Caltrain corridor, although a larger area of TCE would be required in the vicinity of the Hillsdale Boulevard underpass, in order to support modifications to the existing structure and construction of the new structure to carry the additional tracks over Hillsdale Boulevard. Most of the temporarily converted areas would be commercial, mixed-use, residential, industrial, public facilities, parks/open-space, transportation, and vacant land uses.

These TCEs would not directly affect any structures, because they would be on roadways, parking lots, shoulders of the existing railroad tracks, backyards, or vacant areas adjacent to structures that are used for residential, commercial, mixed-use, industrial, public facilities, and parks/open-space purposes. The backyards of two residential properties would be used for TCEs for Alternative A and the backyards of nine residential properties would be used for TCEs for Alternative B within this subsection. The Authority would implement project features to restore areas used for construction (LU-IAMF#3), and would also provide safe access for individuals to residences, commercial buildings, and other structures during construction (SS-IAMF#1, TR-IAMF#2). The TCEs would therefore not alter existing land use patterns because they would not physically affect any structures or prevent access to the existing uses.

Mountain View to Santa Clara Subsection

Construction of both project alternatives would require the temporary use of less than 2 acres of land outside the Caltrain right-of-way for installation of four-quadrant gates and communication

radio towers. Temporarily converted land uses would primarily consist of industrial, mixed-use, and residential land uses.

These TCEs would not directly affect any structures because they would be on roadways, shoulders of the existing railroad track, in parking lots, backyards, or vacant areas adjacent to structures that are used for residential, commercial, and industrial purposes. The backyards of two residential structures would be used for TCEs for both alternatives within this subsection. The Authority would implement project features to restore areas used for construction (LU-IAMF#3) and would also provide safe access for individuals to residences, commercial buildings, and other structures during construction (SS-IAMF#1, TR-IAMF#2). The TCEs would therefore not alter existing land use patterns because they would not physically affect any structures or prevent access to the existing uses.

San Jose Diridon Station Approach Subsection

Temporary land use conversions for project construction in the San Jose Diridon Station Approach Subsection would consist mainly of small TCEs on industrial uses along the northeast side of the proposed HSR right-of-way and within existing transportation rights-of-way. Alternative A construction staging would be east of Lafayette Street, and staging for Alternative B (Viaduct to Scott Boulevard) would be in this general area as well. The site consists of two commercial businesses and an open field on Reed Street. The primary construction staging site in this subsection for the Alternative B (Viaduct to I-880) would be between the Caltrain/Union Pacific Railroad (UPRR) mainline and the UPRR Warm Springs Subdivision Lenzen Wye, the site of two large industrial warehouses, north of West Julian Street. Construction staging for the San Jose Diridon Station would be southeast of the existing station, between Otterson Street and Park Avenue, on land that is the site of two warehouses. The Authority would implement project features to restore areas used for construction (LU-IAMF#3) and would also provide safe access for individuals to residences, commercial buildings, and other structures during construction (SS-IAMF#1, TR-IAMF#2).

Construction of the project alternatives would occur within the existing transportation right-of-way, where land use patterns are already related to transportation use, and construction of HSR would not introduce incompatible land uses. TCEs would not substantially alter the land use patterns in this subsection because the area is completely developed and adjacent existing uses would continue to operate.

CEQA Conclusion

The impact of temporary land use conversions would be less than significant under CEQA for both project alternatives because the use of land for construction would be temporary, structures would not be directly affected, lands would be restored to their pre-construction state, and the project would not result in substantial changes to land use patterns or density outside the permanent rights-of-way that would be incompatible with adjacent land uses. Project features require the Authority's design-build contractor to restore any temporary disruptions or conversions of land outside of the permanent rights-of-way to the uses in place before construction (LU-IAMF#3). With application of this project feature, no disruptions to residents or businesses adjacent to the project footprint would be anticipated, and thus the project would not cause people to relocate, change the use of their land, or abandon properties. Therefore, CEQA does not require any mitigation.

Impact LU#2: Temporary Alteration of Land Use Patterns from Increased Traffic, Noise, Air Quality Emissions, and Visual Changes

Construction of the project would generate increased noise levels, dust and other air pollutants, visual changes, and traffic that could indirectly affect land uses in the RSA. Construction activities would require temporary roadway closures or modifications and lane closures, resulting in temporary changes in vehicle circulation and increased travel times. These temporary changes during construction would affect residents, businesses, and schools within 0.5 mile of the project footprint in the cities and communities along the Project Section. All impacts associated with traffic, air quality, noise, and visual quality are discussed in detail in Sections 3.2, 3.3, 3.4, and 3.15 of this document. The project incorporates features identified in each of these resource

sections that would take place prior to and during construction to avoid or minimize project construction impacts on these resources.

Temporary increases in noise, dust, and traffic and the visual and aesthetic changes generated during construction would occur along the existing Caltrain rail corridor and at the existing Caltrain stations under both alternatives. Construction of the LMF would take place east of the Caltrain corridor under Alternative A and west of the Caltrain corridor under Alternative B. The passing track would only be built under Alternative B. Similarly, a viaduct in the San Jose Diridon Station Approach Subsection would only be built under Alternative B. Consequently, the noise, dust, traffic and visual changes generated during construction would be the same for both alternatives except at the LMF passing track locations, and viaduct locations. Temporary increases in noise and dust and the visual and aesthetic changes caused by construction would be expected to last for a period of 2 to 4.5 years at locations that require major construction associated with the Millbrae Station, the Brisbane LMF, passing tracks (under Alternative B), the San Jose Diridon Station, and the viaduct (under Alternative B).

The East and West Brisbane LMF would require similar types and amounts of construction activities including demolition, grading, paving, erection of building frames; and equipment usage including bulldozers, excavators, tractors, forklifts, and compactors. As a result, temporary increases in noise and dust, and aesthetics and visual changes would be similar under both project alternatives. The East Brisbane LMF under Alternative A would require the realignment of Tunnel Avenue east of the LMF, and both alternatives would require temporary closure of Tunnel Avenue and Lagoon Road for construction of the new realigned Tunnel Avenue overpass. These temporary road closures would be anticipated to last 1 to 3 months, and while they may inconvenience businesses and nearby residences, continued access would be provided to residences, commercial buildings, and other structures during construction (SS-IAMF#1, TR-IAMF#2). Temporary increases in noise, dust, and traffic and the visual and aesthetic changes generated during construction of either the East or West Brisbane LMF would primarily affect vacant and light industrial land uses adjacent to the LMF site. The West Brisbane LMF under Alternative B, however, would be closer to existing residences west of Bayshore Boulevard and the Schlage Lock project (mixed use and offices), which is under construction. The existing nearby residences are illustrated on Figure 3.13-2. These conditions of temporary noise, dust, traffic, and visual changes would not affect land use types unless adjacent properties became vacant primarily as a result of construction impacts.

Temporary increases in noise, dust, and traffic and the visual and aesthetic changes during construction of the passing track and viaduct under Alternative B would be greater than under Alternative A. Building the new passing tracks under Alternative B would require utility relocations; extensions of existing culverts; railbed widening; bridge widening; pedestrian overpasses; modification of existing retaining walls; and relocation of the existing San Carlos Station and platforms to approximately 2,260 feet south of its existing location. Furthermore, the construction of a viaduct and passing track under Alternative B compared to the blended, at-grade track under Alternative A would require a greater level of construction activity and equipment, and result in a longer duration of construction at any given location. Construction of the passing track under Alternative B would occur over approximately 4.5 years, while modifications or replacements of bridges would typically occur over 6 to 12 months. Construction of the viaduct under Alternative B (both viaduct options) is expected to last approximately 1.5 years at any given location. Because adjacent existing land uses in the passing track and viaduct area are a mix of residential, mixed use, and commercial, the temporary indirect construction-related impacts would affect existing land uses that are sensitive to construction-related activities. These conditions could be considered a hardship on residences, and businesses adjacent to the project footprint. However, these temporary impacts would cease once construction is complete, and would not affect land use patterns unless adjacent properties became vacant primarily as a result of construction impacts. Project features identified in Sections 3.2, 3.3, 3.4, and 3.15 would minimize or avoid incompatibility of construction with adjacent land uses by providing continuous property access for residences and businesses, maintaining traffic flow in construction areas,

minimizing fugitive dust emissions, minimizing impacts from noise and vibration, and restoring construction staging areas to their original condition after construction is completed.

Construction-related air quality emissions (Section 3.3) would be similar but slightly greater under Alternative B due to the greater levels of construction activity required for construction of the passing tracks and viaduct relative to Alternative A. These changes would be temporary and would thus not have a long-term impact on land uses, and Section 3.3 identifies that project features would be implemented to minimize impacts, including minimization of fugitive dust emissions (AQ-IAMF#1), minimization of volatile organic compounds (AQ-IAMF#2), use of renewable diesel (AQ-IAMF#3), and project features to minimize the emissions from on-road and off-road equipment (AQ-IAMF#4, AQ-IAMF#5).

Temporary visual changes (Section 3.15) associated with construction would occur along the entire length of the alignment. These visual changes would introduce contrast between construction equipment, stockpiles, and activities and the established character of areas where construction would occur. These visual changes would be greater under Alternative B due to the additional construction activities and equipment required for construction of the passing tracks and viaduct, and the closer proximity of the West Brisbane LMF to residential receptors in Brisbane, including the residences west of Bayshore Boulevard and the Schlage Lock project, which is under construction. Section 3.15 identifies mitigation that would minimize construction-related visual change and shield nighttime construction lighting.

Construction activities and temporary road closures (Section 3.2) would generate traffic under both project alternatives; however, traffic congestion would be greater under Alternative B, due to construction of the passing tracks, which would require modifications and temporary lane or road closures affecting roadway overcrossings and undercrossings in a highly congested area along El Camino Real. In addition, in the San Jose Diridon Station Approach Subsection, a lengthy straddle bent construction would be used to bridge the I-280/SR 87 interchange for Alternative B (both viaduct options). Footings for the viaduct would be built near the ramps and in the median of I-280. Construction would be staged to minimize disruption of these facilities. Cahill Street would be extended to Park Avenue and lanes would be temporarily converted to transit-only during construction. These changes for the passing tracks and viaduct would be temporary and would thus not have a long-term impact on land uses. Section 3.2 identifies IAMFs that would be implemented to minimize impacts, including measures to provide safe access for individuals to residences, commercial buildings, and other structures during construction (SS-IAMF#1, TR-IAMF#2). The Authority would also require the use of designated truck routes (TR-IAMF#7), restrict construction-related employee trips (TR-IAMF#6), and implement remote parking areas for construction personnel (TR-IAMF#3).

CEQA Conclusion

The impact would be less than significant under CEQA for both project alternatives because temporary hardships on users adjacent to the project footprint would not result in substantial changes to land use patterns. Residents or businesses would be unlikely to relocate as a result of the temporary dust, noise, or traffic that would accompany construction. Project features and mitigation measures identified in Sections 3.2, 3.3, 3.4, and 3.15 would avoid, minimize, or mitigate traffic, air quality, noise, and visual impacts from construction. Construction of the alternatives would not prevent the continued use of adjacent properties or introduce conditions incompatible with adjacent uses that would trigger temporary or permanent relocations or conversions that would result in substantial changes to land use patterns. Therefore, CEQA does not require any mitigation.

Impact LU#3: Permanent Alteration of Land Use Patterns from Land Use Conversion and Introduction of Incompatible Uses along Track Alignment

Both project alternatives would require the permanent acquisition and conversion of land to transportation use for trackwork, including the passing tracks and viaduct under Alternative B, installation of communication radio towers, and permanent easements for utilities. Overall, the passing tracks would require the most permanent acquisitions outside of the Caltrain right-of-way. The remaining permanent impacts along the track alignment would be minimal and would be limited to the communication radio towers, which measure approximately 20 feet by 15 feet, and narrow strips of land next to the existing track that would be required for trackwork or for the relocation of utilities.

The acquisition and permanent conversion of land that does not have existing transportation-related use has the potential to result in altered land use patterns. Project improvements on land that has existing transportation-related use (i.e., the Caltrain right-of-way) would not alter the existing land use pattern of an active railroad. In addition, project improvements in the Caltrain right-of-way would not alter planned land use patterns because there are no plans to remove the track and develop the area with other land uses.

The Authority designed the project alternatives to follow the existing transportation right-of-way to the extent feasible. Construction of the project alternatives within the existing Caltrain corridor would minimize but not avoid changes to existing land uses. Permanent land use conversions would take place in areas adjacent to the track alignment, and would convert existing land uses to transportation-related uses. Permanent land use conversion would result in the displacement of residences and businesses adjacent to the right-of-way. Most displacements would occur in the cities of San Mateo, Belmont, and San Jose where additional right-of-way acquisition would be required to build the new passing track and viaduct under Alternative B (see Section 3.12 for a detailed discussion of displacements). The project would result in the permanent conversion of these land uses to transportation; however, overall, the project would not result in the permanent alteration of land use patterns, because the project would not create new physical divisions or barriers. The project would add HSR facilities to an existing transportation corridor, but would not change the function or land use designation of adjacent land uses. Table 3.13-9 summarizes the existing land uses that would be permanently converted to transportation-related uses for construction of the track alignment.

Table 3.13-9 Land Use Permanently Converted by the Project Alternatives for Track Alignment

Project Component	Existing Land Use Category (acres)								
	Residential	Mixed Use	Commercial	Industrial	Public Facilities	Parks/Open Space	Transportation	Vacant	Total
Alternative A									
San Francisco to South San Francisco Subsection									
Track alignment	0	0	0	0.5	0.2	0	0.3	<0.1	1.0
San Bruno to San Mateo Subsection									
Track alignment	0.5	0	0.2	0	0	0	0	0	0.7
San Mateo to Palo Alto Subsection									
Track alignment	0.3	0.3	0.2	0.7	0	0	0	0.1	1.6
Mountain View to Santa Clara Subsection									
Track alignment	0.1	0.1	<0.1	0.6	0	0	0.1	0	0.9
San Jose Diridon Station Approach Subsection									
Track alignment	9.8	1.1	0	34.5	1.9	4.3	28.2	0	79.8
Totals	10.7	1.5	0.4	36.3	2.1	4.3	28.6	0.1	84.0
Alternative B									
San Francisco to South San Francisco Subsection									
Track alignment	0	0	0	0.5	0.3	0	0.6	<0.1	1.4
San Bruno to San Mateo Subsection									
Track alignment	0.5	0	0.2	0	0	0	0	0	0.7
San Mateo to Palo Alto Subsection									
Track alignment	0.3	<0.1	<0.1	0.7	0	0	0	0.1	1.1
Passing tracks	0	2.3	4.8	0	0	0	<0.1	0.1	7.2
Mountain View to Santa Clara Subsection									
Track alignment	0.1	0.1	<0.1	0.6	0	0	0.1	0	0.9

Project Component	Existing Land Use Category (acres)								
	Residential	Mixed Use	Commercial	Industrial	Public Facilities	Parks/Open Space	Transportation	Vacant	Total
San Jose Diridon Station Approach Subsection (Viaduct to I-880)									
Track alignment	4.9	0.4	0.5	46.4	2.6	3.4	28.5	0	86.7
San Jose Diridon Station Approach Subsection (Viaduct to Scott Boulevard)									
Track alignment	4.0	0.4	0.7	38.1	3.2	3.4	32.1	0	81.8
Totals Alternative B (Viaduct to I-880)	5.8	2.8	5.5	48.2	2.9	3.4	29.2	0.2	98.0
Totals Alternative B (Viaduct to Scott Boulevard)	4.9	2.8	5.7	39.9	3.5	3.4	32.8	0.2	93.1

Sources: Authority 2019a, 2019b

I- = Interstate

LMF = light maintenance facility

The impacts associated with the 4th and King Street Station and Millbrae Station can be found in Impact LU#4 (Table 3.13-10). The impacts associated with Brisbane LMF, Bayshore Station modifications, and Tunnel Avenue realignment can be found in Impact LU#5 (Tables 3.13-11, 3.13-12, and 3.13-13).

Land use impact calculations exclude the existing Caltrain right-of-way, with exception of the San Jose Diridon Station Approach Subsection.

Permanent Alteration of Existing Land Uses

San Francisco to South San Francisco Subsection

In the San Francisco to South San Francisco Subsection, the project alternatives would require the permanent conversion of 1.0 acre under Alternative A and 1.4 acres under Alternative B of land outside the Caltrain right-of-way for track modifications and communication radio towers. The greater amount of permanent land acquisition under Alternative B would be due to additional improvements that would be required for Alternative B to accommodate the LMF. As shown in Table 3.13-9, the land that would be permanently acquired is industrial, public facilities, transportation, and vacant land uses.

In San Francisco, two communication radio towers would be installed in industrial areas next to the railroad track. In Brisbane, one public facility, the park-and-ride lot, would be relocated to accommodate the permanent easement for a utility line. In addition, a communication radio tower would be installed in a vacant, vegetated area next to Bayshore Boulevard and another communication radio tower would be installed in a parking lot, next to Van Water and Rodgers Road.

No displacements would occur as a result of trackwork in the San Francisco to South San Francisco Subsection. The addition of HSR infrastructure to existing rail infrastructure along the existing track alignment would not change existing adjacent land uses or inhibit continuation of existing uses on adjacent lands. The existing land uses adjacent to the railway corridor would continue with implementation of the project.

San Bruno to San Mateo Subsection

In the San Bruno to San Mateo Subsection, the project alternatives would require the permanent conversion of 0.7 acre of land outside the Caltrain right-of-way for track modifications, permanent easements for utilities, and one communication radio tower. The small areas of land that would be permanently acquired have existing residential and commercial land uses.

In San Bruno, a permanent HSR easement would be required in the backyards of approximately six residential properties (single-family and multifamily) located next to each other. Approximately four of these structures, which include a total of seven residential units, would be displaced. In Millbrae, a permanent easement for utilities would be required in the backyard of approximately 20 residential structures. None of these residential structures would be displaced. In addition, in Millbrae, a permanent easement for HSR and a roadway would be required in an area with two commercial buildings and a parking lot for commercial uses. These two commercial businesses would be displaced. In San Mateo, a communication radio tower would be in an area with an existing commercial business and would result in the displacement of this commercial business.

The project would result in the permanent displacement of seven residences and three commercial buildings. The displacements would be adjacent to the railway corridor, which would reduce the number of residences and commercial businesses. These displacements would not result in permanent alterations to the general land use pattern. Furthermore, the addition of permanent HSR infrastructure to the existing Caltrain infrastructure along the track alignment would not change existing adjacent land uses or inhibit continuation of existing uses on adjacent lands. The existing land uses adjacent to the rail corridor right-of-way would remain with implementation of the project.

San Mateo to Palo Alto Subsection

Permanent land use conversion in the San Mateo to Palo Alto Subsection would be 1.6 acres under Alternative A and 8.3 acres under Alternative B of land outside the Caltrain right-of-way. The greater amount of permanent land acquisition under Alternative B would be due to construction of the passing track through San Mateo, Belmont, San Carlos and into the northern portion of Redwood City. As shown in Table 3.13-9, the area of land that would be permanently acquired has existing residential, mixed-use, commercial, industrial, transportation, and vacant land uses.

The permanent acquisitions for Alternative A would be primarily due to permanent easements for utilities and HSR, as well as installation of communication radio towers. In Belmont, a total of ten commercial businesses and one residence would be displaced. This would be a result of a permanent easement for a utility. In Palo Alto, two communication radio towers would be within commercial and residential land uses and would result in the displacement of one residence and one commercial business. In addition, between San Mateo and Palo Alto, the permanent acquisitions would occur in parking lots or vacant lands.

The permanent acquisitions for Alternative B would be primarily due to the installation of the passing tracks and like Alternative A would also require permanent acquisitions for permanent easements for utilities and HSR, as well as installation of communication radio towers. Approximately 11 residences, 90 businesses, and 1 community and public facility would be displaced for Alternative B (see Impact SOCIO#2 in Section 3.12). Under Alternative B, the greatest number of displacements would occur in the cities of San Mateo and Belmont along El Camino Real and Old County Road where additional right-of-way acquisition would be required to construct the new passing track. These acquisitions and land use conversions would take place adjacent to the existing railway corridor. As discussed in Impact SOCIO#2 in Section 3.12, the displaced businesses represent a relatively small number of businesses in the whole district. The surrounding businesses would be able to continue operating, and the long-term viability of the area is unlikely to be affected. In addition, throughout the alternative alignment between San Mateo and Palo Alto, permanent acquisitions would occur in parking lots or vacant areas associated with residential, mixed-use, commercial, industrial, and transportation land uses.

While residential and business displacements would remove existing uses within the immediate area adjacent to the railway corridor for both alternatives, the overall residential, mixed-use, commercial, industrial, and transportation land use patterns would remain the same. Furthermore, the addition of permanent HSR infrastructure to the existing Caltrain infrastructure along the track alignment would not change existing adjacent land uses or inhibit continuation of existing uses on adjacent lands. The existing land uses adjacent to the rail right-of-way would remain with implementation of the project.

Mountain View to Santa Clara Subsection

In the Mountain View to Santa Clara Subsection, project construction would require the permanent conversion of 0.9 acre of land outside the Caltrain right-of-way under either project alternative. These permanent acquisitions would occur in Mountain View and Sunnyvale and would be required for installation of four communication radio towers. As shown in Table 3.13-9, the small area of land that would be permanently acquired has predominantly existing industrial land uses, as well as some residential, mixed-use, commercial, and transportation land uses. These adjacent land uses would continue to operate because the permanent acquisitions would not displace residences or businesses. Rather, the permanent acquisitions would occur in parking lots or on the edge of vacant areas or parking lots for industrial, residential, mixed-use, and commercial land uses. Thus, these permanent alterations would not result in permanent changes to land use patterns.

Furthermore, the addition of HSR infrastructure to the existing Caltrain infrastructure along the track alignment would not change existing adjacent land uses or inhibit continuation of existing uses on adjacent lands. The existing land uses are adjacent to transportations rights-of-way, and would remain with implementation of the project.

San Jose Diridon Station Approach Subsection

Track modifications, new or relocated UPRR track, roadway modifications, and traction power substation realignments and right-of-way improvements would require 79.8 acres of land acquisition for permanent conversion under Alternative A, 86.7 acres under Alternative B (Viaduct to I-880), and 81.8 acres under Alternative B (Viaduct to Scott Boulevard). Approximately 24 residences, businesses, and community facilities would be displaced as a result of permanent land use acquisition along the track alignment for Alternative A. Approximately 88 residences, business, and community facilities would be displaced as a result of permanent land use acquisition along the track alignment for Alternative B (Viaduct to I-880), while approximately 140

residences, businesses, and community facilities would be displaced as a result of permanent land use acquisition along the track alignment for the Alternative B (Viaduct to Scott Boulevard) (see Impact SOCIO#2 in Section 3.12). Although these residences, businesses, and community and public facilities would be permanently displaced by the project, the displacements would take place adjacent to the railway corridor, which would not disrupt the overall land use pattern. Thus, the displacement would not result in permanent alterations to the land use patterns.

Permanent Alteration of Planned Land Uses

Overall, the planned land uses of the areas that would be permanently affected by trackwork would be similar to the existing land uses. For example, in San Francisco, there are two areas that have been identified as having existing permanent impacts on industrial land uses due to the installation of two communication radio towers. These two areas have been designated as planned industrial land uses. The impacts on planned land uses would, therefore, be the same as the impacts on existing land uses. Because the impacts would be limited to small areas where the project would be outside the existing Caltrain right-of-way, the addition of permanent HSR infrastructure would not change overall planned land uses patterns. Thus, these permanent alterations would not result in permanent changes to planned land use patterns.

In addition, only one area has been identified where there is a small area of track improvements outside the Caltrain right-of-way, where planned developments would also be located. In Sunnyvale, a communication radio tower is proposed within a portion of the Lawrence Station Area Plan. The communication radio tower would be on the edge of an area planned for office/research and development. The area where the communication radio tower would be installed is directly adjacent to the existing track and has existing track uses, as well as a vegetated area adjacent to an office parking lot. Due to the small size of the communication radio tower (20 feet by 15 feet) and because it would be at the edge of the planned development where there is existing railroad use, the project would not result in a substantial change in land use patterns. Thus, trackwork would not result in permanent alterations to the planned land use patterns.

CEQA Conclusion

The permanent alteration to existing land use patterns along the track alignment would be a less-than-significant impact under CEQA for both project alternatives because these acquisitions would be predominantly within and adjacent to existing transportation rights-of-way. Permanent land acquisitions would primarily occur within existing transportation rights-of-way or represent small acquisitions along the entire alignment, which would not alter the overall land use patterns. Although construction of both project alternatives would require the displacement of some residences and businesses adjacent to the existing track alignment, these displacements would not cause a substantial change in land use patterns because the project would be primarily within an existing railroad corridor and because adjacent land uses are already near the existing railroad corridor. Therefore, CEQA does not require any mitigation.

Impact LU#4: Permanent Alteration of Land Use Patterns from Land Use Conversion and Introduction of Incompatible Uses at Stations

Permanent Alteration of Existing Land Use

As illustrated on Figure 3.13-1 and shown in Table 3.13-10, the footprint for the 4th and King Street Station is primarily within the existing Caltrain station right-of-way; however, there are small portions of the permanent footprint (1.9 acres of land) that extend across roadway rights-of-way along Townsend Street and Fifth Street. No improvements are proposed within these roadway rights-of-way; therefore, there would be no permanent alteration of the existing land use patterns on these roadways.

Table 3.13-10 Existing Land Use Permanently Converted by Stations

Project Component	Existing Land Use Category (acres)						Total
	Residential	Commercial	Industrial	Public Facilities	Parks/Open Space	Transportation	
4th and King Street Station	0.0	0.0	0.0	0.0	0.0	1.9	1.9
Millbrae Station	0.1	5.5	0.0	0.0	0.0	2.2	7.8
San Jose Diridon Station (Alt A)	3.7	0.7	38.2	1.1	1.8	0.0	45.5
San Jose Diridon Station (Alt B)	4.8	3.8	46.2	1.0	0.6	0.0	56.4

The Millbrae Station would require the permanent conversion of 7.8 acres under Alternatives A and B, consisting of lands with transportation and commercial existing uses, with some small areas of residential land uses. Table 3.13-10 summarizes these permanent impacts and Figure 3.13-3 illustrates the location of these existing land uses. Permanent land acquisitions would be required west of the existing Millbrae Station for construction of a new HSR station concourse and platforms, as well as overhead circulation elements between the new station and platforms. As described in detail in Section 3.12, both project alternatives would displace 1 residence and 12 businesses along El Camino Real west of the Millbrae Station, including a senior nursing home facility. The commercial land uses directly west of the station (on the east and west sides of Serra Avenue) would be converted from commercial uses to transportation uses and used as surface parking lots.

The at-grade San Jose Diridon Station under Alternative A would require the permanent conversion of 45.5 acres, consisting primarily of lands with existing industrial uses. The aerial San Jose Diridon Station under Alternative B (both viaduct options) would require the permanent conversion of 56.4 acres, also consisting primarily of lands with existing industrial uses. Table 3.13-10 summarizes these permanent impacts and Figure 3.13-4 illustrates the location of these existing land uses. Permanent land acquisitions would be required north, south, and west of the existing San Jose Diridon Station for construction of a new HSR station concourse and platforms, as well as overhead circulation elements between the new station and platforms. Because the San Jose Diridon Station would be located at the urbanized site of an existing transit facility, it would not substantially change the site's existing land use.

Permanent Alteration of Planned Land Use

With respect to alteration of planned land uses in the 4th and King Street Station area, the project footprint is within areas designated for commercial and mixed-use land uses (Figure 3.13-5). The City and County of San Francisco is evaluating options to extend Caltrain and HSR into the Salesforce Transit Center (SFTC) (City and County of San Francisco 2018c). There are several alignment options being considered to implement the extension to SFTC. One of the components to accommodate the extension to SFTC is the configuration of the 4th and King Street Station and the surface rail yard. There are two options for the configuration of the 4th and King Street Station and the surface rail yard, including (1) maintaining the 4th and King Street Station and the surface rail yard at its current location, and (2) relocating or reconfiguring the 4th and King Street Station (e.g., reconfigured at surface to a smaller footprint, moved underground, moved south, or a combination of reconfigurations) and redeveloping the site with commercial uses. The project improvements at the 4th and King Street Station are not incompatible with planned commercial and mixed-use land uses and would depend on future decisions about relocating the 4th and King

Street Station. Therefore, there would be no permanent alteration of the planned land use patterns due to the proposed 4th and King Street Station improvements.

The HSR modifications to the Millbrae Station would also affect planned development in the MSASP. Most of the area to be affected for the Millbrae Station is in locations that are planned for mixed-use TOD. This would include impacts on the Millbrae Serra Station Development, which is an approved but not yet under construction mixed-use TOD project, containing residential, office, retail, and public parking uses. This Millbrae Serra Station Development project would be in the area where permanent land acquisition has been identified for the Millbrae Station. The planned Millbrae Serra Station Development project proposes building 444 multifamily residential units, 290,100 square feet of office, and 13,200 square feet of retail. Construction of the Millbrae Station would conflict with the approved Millbrae Serra Station Development project. Thus, implementation of the HSR modifications to Millbrae Station would conflict with this planned land use, and would result in the permanent alteration of planned land use patterns. However, implementation of the HSR modifications would not preclude future development of an integrated and mutually-supporting mixed-use development at the site, with the Millbrae Station as its anchor and focal point. Figure 3.13-13 depicts an illustrative concept of a potential future retrofit of the site, which will be built with the station facilities as shown in yellow and where a future TOD project or projects could be located adjacent to the Millbrae Station (as shown in dashed lines). While such type of development is not necessary for the operation of the HSR project or the Millbrae Station, such development would be consistent with the City of Millbrae's desire for TOD at the site and with state and Authority policies supportive of infill development, as a means to achieve GHG emissions reductions and reductions of VMT.



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Figure 3.13-13 Not-To-Preclude Transit-Oriented Development Massing Diagram at Millbrae Station

San Jose has recognized and incorporated mixed uses or TOD into its general plan and the *Diridon Station Area Plan* (City of San Jose 2014). The *Diridon Station Area Plan* in San Jose permits higher-density development than exists around the station. The Authority has entered into a station area planning agreement with the City of San Jose, the purpose of which is to advance

implementation of the *Diridon Area Station Plan*. Major elements of the agreement include an implementation strategy, financial analysis, intermodal station planning, parking and station access, and development planning. The HSR station would be expected to stimulate residential, industrial, and commercial development on adjacent land that is consistent with existing land uses and land use plans and policies. Therefore, construction of the HSR station would be consistent with applicable land use plans and strategies and would not result in alterations of planned land use patterns.

In addition, the *San Jose Visual Design Guidelines for California High-Speed Rail Infrastructure* (Authority and City of San Jose 2012) establishes guidelines for high-quality aesthetic design for HSR infrastructure that fits the evolving physical character and unique cultural context of San Jose. The guidelines state that HSR travel and infrastructure are integral to the development of San Jose's vision for its future growth. The guidelines have been incorporated into a Cooperative Agreement between the City of San Jose and the Authority, approved by the City Council and the Authority Board of Directors, that sets forth in more detail mutual commitments between the Authority and the City of San Jose regarding cooperation, public outreach, quality of design, construction, funding, implementation, decision making, and long-term maintenance. Implementation of these design guidelines would reduce potential incompatibility of HSR infrastructure with adjacent land uses, thereby minimizing changes to planned uses.

Incompatible Land Uses

The areas of permanent acquisition for the 4th and King Street Station, Millbrae Station, and San Jose Diridon Station would be adjacent to the existing stations. Because the permanent alterations would be in areas with existing transportation uses, the project would not introduce incompatible land uses into the station areas. Thus, the permanent acquisitions would not alter land use patterns.

CEQA Conclusion

The impact on existing and planned land use patterns under CEQA for HSR modifications to the 4th and King Street Station would be less than significant for Alternatives A and B because the station is primarily in an area with existing and planned transportation land uses. The impact under CEQA on existing land use patterns for HSR modifications to the Millbrae Station would, however, be significant for Alternatives A and B due to the introduction of incompatible land uses (the conversion of commercial land uses to transportation-related land uses) that would cause a substantial change in land use patterns. Furthermore, the impact on planned land uses from construction of the Millbrae Station would be a significant impact under CEQA due to the permanent alteration of the land uses planned in the Millbrae Serra Station Development project. The impact on existing and planned land use patterns under CEQA for HSR modifications to the San Jose Diridon Station would be less than significant for Alternatives A and B because the San Jose Diridon Station would be at the urbanized site of an existing transit facility.

Overall, the impact under CEQA on existing and planned land use patterns for HSR modifications to stations would be significant under both project alternatives. This is due to the substantial change in land use patterns that would occur at the Millbrae Station due to the introduction of incompatible land uses and due to the effects on the planned Millbrae Serra Station Development project. No feasible mitigation is available to address these impacts.

Impact LU#5: Permanent Alteration of Land Use Patterns from Land Use Conversion at the Brisbane Light Maintenance Facility

Permanent Alteration of Existing Land Uses

Both project alternatives would require construction of an LMF primarily on lands that were formerly used as a rail yard and Class II landfill. Each LMF would include a maintenance yard with 17 yard tracks adjacent and parallel to a maintenance building containing eight shop tracks with interior access and inspection pits for underside and truck inspections. The LMF would provide storage capacity for trains and accommodate light maintenance activities, including daily inspections, pre-departure cleaning, testing, and servicing between runs; monthly inspections; quarterly inspections; train washing; and wheel truing. The LMF and associated track and

roadway improvements would be built mostly in vacant lands and other lands used for commercial, industrial, public facility, park, and transportation uses.

Table 3.13-11 shows the existing land uses that would be permanently converted from construction of the East or West Brisbane LMF. Construction would have the following impacts on existing land uses:

- **Vacant**—Most of the land that would be permanently converted is vacant. Alternative B would have a slightly greater impact than Alternative A. There are no existing activities in these vacant areas; therefore, the placement of an LMF in vacant areas that are surrounded by industrial uses would be compatible with the existing uses.
- **Commercial**—Construction of the Tunnel Avenue realignment would result in impacts on existing commercial uses. Permanent acquisitions associated with the realigned Tunnel Avenue overpass in Brisbane would displace three businesses adjacent to the existing railway and roadway overpass under both project alternatives (see Impact SOCIO#2 in Section 3.12). Although these individual businesses would be permanently displaced by the project, their displacement would not permanently alter the overall land use pattern, which is dominated by the railway corridor and existing roadway.
- **Industrial**—There are industrial areas east and west of the Caltrain right-of-way. The new northern lead track for the East Brisbane LMF (Alternative A) would be in an industrial area that stores lumber. Although the footprint of the East Brisbane LMF is in areas associated with the Kinder Morgan facility, the project would avoid this area. The permanent footprint for the West Brisbane LMF (Alternative B) would include portions of the maintenance yard and the relocated Tunnel Avenue in areas being used for industrial uses. The planned improvements are industrial in nature and would be compatible with existing industrial uses.
- **Public facilities**—Both alternatives would permanently affect one public facility (Brisbane Fire Station). This public facility would be relocated but the fire station would remain in use.
- **Parks/open space**—There are two areas of parks/open space. There is a small portion of the permanent footprint for both alternatives in an area associated with the existing Brisbane Community Park. This part of the permanent footprint is associated with the Tunnel Avenue realignment and is limited to the edge of the park, such that the park would be able to continue its use after either alternative is built and the impact at this location would be minimal. In addition, a portion of the existing Caltrain right-of-way for both alternatives is in an area associated with Brisbane Lagoon, which is classified as an existing parks/open-space land use; however, no planned improvements are proposed within that portion of the existing Caltrain right-of-way.
- **Transportation**—Access roads are adjacent to the existing Caltrain right-of-way under both alternatives. Alternative B would have a slightly greater impact than Alternative A. Although these areas are mapped within the project footprint, no planned improvements are proposed for these access roads.
- **Icehouse Hill**—There is an existing hill west of the Caltrain right-of-way known as Icehouse Hill. Construction of the East Brisbane LMF (Alternative A) would not affect Icehouse Hill; however, construction of the maintenance yard and a portion of the southern lead track for the West Brisbane LMF (Alternative B) would require grading of this hill. The West Brisbane LMF would permanently alter this area that is vacant at present, but provides habitat for listed butterfly species, as described in Impact BIO#2 in Section 3.7.

Table 3.13-11 Existing Land Uses Permanently Converted by the Light Maintenance Facility

Project Component	Existing Land Use Category (acres)						Total
	Commercial	Industrial	Public Facilities	Parks/Open Space	Vacant	Transportation	
Alternative A							
East Brisbane LMF	1.0	7.6	2.6	<0.1	86.2	2.2	99.6
Alternative B							
West Brisbane LMF	0.9	6.6	2.6	<0.1	98.9 ¹	3.6	112.6

LMF = light maintenance facility

¹ This acreage includes the area of Icehouse Hill.

Permanent Alteration of Planned Land Uses

The proposed sites being considered for the Brisbane LMF, while primarily vacant, are in areas that have been designated for planned development (residential permitted), planned development (residential prohibited), heavy commercial, and public facility land uses, per the Brisbane 2018 General Plan Amendment (Figure 3.13-6) (City of Brisbane 2018). The Brisbane 2018 General Plan Amendment identifies that the Baylands area where the Brisbane LMF would be located is planned for “a transit-oriented variety of residential, employment- and revenue-generating uses; natural resource management; and public and semi-public facilities” (City of Brisbane 2018). The Brisbane 2018 General Plan Amendment identifies two areas for planned development, one where residential development is permitted and another where residential development is prohibited. These planned land uses are expected to result in increased densities. Increased density at the Baylands is supported by Plan Bay Area, which identifies the Schlage Lock project site as a priority development area and transit priority area, and Brisbane Baylands as a priority development area.

Table 3.13-12 identifies the planned land uses that could be permanently converted by the East Brisbane LMF and West Brisbane LMF. The commercial (due to the Tunnel Avenue realignment), public facilities (Brisbane Fire Department Station), and parks/open space (Brisbane Community Park and Brisbane Lagoon) planned land uses would be the same as the existing land uses. Therefore, the project’s impact on these planned land uses would be the same as the impact on the existing land uses, as summarized under the Permanent Alteration of Existing Land Uses subheading. These planned land uses would not be permanently altered for either the East Brisbane LMF or the West Brisbane LMF. A portion of the existing Caltrain right-of-way (0.3 acre) for both alternatives is in an area associated with the Schlage Lock project, which is designated for residential uses and is under construction. No HSR improvements are proposed within that portion of the existing Caltrain right-of-way; therefore, both alternatives would not affect the planned Schlage Lock project.

The East Brisbane LMF (Alternative A) would include new lead tracks and improvements associated with the relocated Bayshore Station in areas designated for heavy commercial land uses. The West Brisbane LMF (Alternative B) would include improvements associated with the relocated Bayshore Station in areas designated for heavy commercial land uses. According to the Brisbane General Plan, heavy commercial land use provides for bulk sales, offices, meeting halls, vehicle storage and equipment maintenance. It also allows outside storage of vehicles and equipment (City of Brisbane 1994). The implementation of new lead tracks and improvements associated with the relocated Bayshore Station would be compatible with this planned land use and would thus not alter planned land use patterns.

In addition, planned land use of Icehouse Hill would be the same as the existing land use (e.g., preservation of habitat). Therefore, the project’s impact on this planned land use would be the same as the impact on the existing land uses, as summarized under Permanent Alteration of Existing Land Uses. This planned land use would not be affected by the East Brisbane LMF; however, the planned land use would be permanently altered by the West Brisbane LMF.

Table 3.13-12 Planned Land Uses Permanently Converted by the Light Maintenance Facility

Project Component	Planned Land Use Category (acres)							
	Residential	Commercial	Public Facilities	Parks/Open Space	Heavy Commercial	PD (residential permitted)	PD (residential prohibited)	Total
Alternative A								
East Brisbane LMF	0.3	1.7	1.4	<0.1	4.3	2.0	93.3	103.0
Alternative B								
West Brisbane LMF	0.3	1.6	1.5	<0.1	1.9	20.7	90.1 ¹	116.1

LMF = light maintenance facility

PD = planned development

¹ This acreage includes the area of Icehouse Hill.

The East Brisbane LMF and West Brisbane LMF would both affect areas that have been designated for planned development, including planned development (residential permitted) and planned development (residential prohibited). As shown in Table 3.13-13, the West Brisbane LMF (Alternative B) would have a substantially greater impact on areas designated for planned development (residential permitted) than the East Brisbane LMF (Alternative A).

Table 3.13-13 Permanent Impacts of the Light Maintenance Facility on Brisbane Baylands Planned Development

Land Use Designation	Planned Development (acres)	Development Potential with Alternative A			Development Potential with Alternative B		
		Impact (acres)	Remaining Acres	% Change	Impact (acres)	Remaining Acres	% Change
Planned development (residential prohibited)	485.5	93.3	392.2	- 19.2	90.1	395.4	- 18.6
Planned development (residential permitted)	102.0	2.0	100.0	- 2.0	20.7	81.3	- 20.3
Total	587.5	95.3	492.2	- 16.2	110.8	476.7	- 18.9

Sources: City of Brisbane 2018; Authority 2019a

Planned development acreages by land use type were based on the Brisbane 2018 General Plan Amendment.

The Authority estimated the remaining development potential for Brisbane Baylands under Alternatives A and B by overlaying the project footprint on the planned land use designations from the 2018 General Plan Amendment and calculating the acreages of permanent impacts based on the project footprint. Based on this analysis, construction of the Brisbane LMF would reduce the amount of land available for development by approximately 16.2 percent for the East Brisbane LMF under Alternative A and by 18.9 percent for the West Brisbane LMF under Alternative B (see Table 3.13-13). Figures 3.13-7 and 3.13-8 depict these impacts on planned development for Alternatives A and B, respectively.

Both the East Brisbane LMF and West Brisbane LMF would result in the permanent acquisition of land planned for commercial development (i.e., lands designated as planned development [residential prohibited]). This would be considered a permanent alteration of a planned land use pattern. Nonetheless, this reduction in areas of planned commercial development would not necessarily impede the planned development envisioned in the Brisbane 2018 General Plan Amendment. The Brisbane 2018 General Plan Amendment accommodates for 6.5 million square feet of commercial areas, with an additional 500,000 square feet for a hotel (City of Brisbane 2018). Although the East Brisbane LMF and West Brisbane LMF would reduce the area where this development could occur, this development could still occur in the areas not affected by the project.

The East Brisbane LMF and West Brisbane LMF for Alternatives A and B, respectively, would both result in the permanent acquisition of land planned for a combination of commercial and residential development (i.e., lands designated as planned development [residential permitted]). The relocation of the Bayshore Caltrain Station associated with the implementation of the East Brisbane LMF would result in a 2.0-acre permanent impact on lands planned for a combination of commercial and residential development. The West Brisbane LMF would also affect lands planned for a combination of commercial and residential development due to the relocation of the Bayshore Caltrain Station. However, the West Brisbane LMF would have an additional impact associated with the lead tracks and the maintenance yard, for a total 20.7-acre impact.

The project's acquisition of lands in Brisbane, where residential development is planned and permitted, could affect the City of Brisbane's ability to meet its required Housing Element and Regional Housing Need Allocation (RHNA).³ The 2015–2022 Housing Element for the City of Brisbane General Plan identifies the City of Brisbane required RHNA as 293 housing units (City of Brisbane 2015b). In addition, as of April 2019, the California Legislature is in the process of considering an increase in the City of Brisbane's required RHNA, per SB 672. Alternative B would have a greater impact on the City of Brisbane's ability to meet its RHNA than Alternative A because Alternative B would require the acquisition of more lands where residential development is permitted than Alternative A. The Authority will continue ongoing coordination with Brisbane and the developers for the Brisbane Baylands site in order to minimize potential incompatibilities between the Brisbane LMF and future planned development on the Brisbane Baylands site.

CEQA Conclusion

The impact under CEQA associated with the permanent alteration of existing land use patterns would be less than significant for Alternative A because the East Brisbane LMF would be primarily within vacant areas and would not introduce incompatible land uses affecting existing commercial, industrial, development under construction (Schlage Lock project), public facilities, parks/open space, and transportation land uses, that would cause a substantial change in land use patterns. Alternative B would have impacts similar to Alternative A; however, the West Brisbane LMF under Alternative B would have an additional impact associated with the grading of Icehouse Hill, which is a prominent area for habitat preservation and would be considered a substantial change in land use patterns through the introduction of an incompatible use. Thus, the impact under CEQA associated with the permanent alteration of existing land use patterns would be significant for Alternative B. No feasible mitigation is available to address this impact for Alternative B.

Both alternatives would result in the permanent acquisition of land designated as planned development (residential prohibited). Therefore, the impact under CEQA associated with the permanent alteration of planned land use patterns would be significant for Alternatives A and B. In addition, Alternative B would acquire lands designated as planned development (residential permitted), which would contribute to the significant impact under CEQA associated with the

³ As part of RHNA, the California Department of Housing and Community Development, determines the total number of new homes the Bay Area needs to build—and how affordable those homes need to be—in order to meet the housing needs of people at all income levels. ABAG then distributes a share of the region's housing need to each city, town and county in the region. Each local government must then update the Housing Element of its general plan to show the locations where housing can be built and the policies and strategies necessary to meet the community's housing needs.

permanent alteration of planned land use patterns. However, the acquisition of planned development (residential permitted) would be less than significant for Alternative A, because the East Brisbane LMF would only acquire 2 percent of the area designated for this use. Overall, Alternative A would result in a significant impact under CEQA associated with the permanent alteration of planned land use patterns due to the acquisition and conversion of lands designated as planned development (residential prohibited) and Alternative B would result in a significant impact under CEQA associated with the permanent alteration of planned land use patterns due to the acquisition and conversion of lands designated as planned development (residential prohibited) and planned development (residential permitted). No feasible mitigation is available to address these impacts.

Operations Impacts

Operation of the project would involve scheduled train travel along the HSR line through the Bay Area, as well as inspection and maintenance along the track and railroad right-of-way and at stations, and on structures, fencing, power systems, positive train control, and communications. Chapter 2 describes operations and maintenance (O&M) activities in more detail. Operation of the project would introduce new sources of noise and visual impacts within the RSA (discussed in Section 3.4 and Section 3.15, respectively). No impacts from conversion of existing land uses would result from operations. All impacts would occur during the construction period because by the time the project is in operation, all temporary land use conversions would be restored to their previous use, and permanent land use conversions would have already taken place.

Impact LU#6: Permanent Alteration of Land Use Patterns from Increased Noise, Light and Glare

Noise, Light, and Glare—Track Alignment and Stations (except near Brisbane)

Both project alternatives would be operated primarily in the existing Caltrain right-of-way from downtown San Francisco to West Alma Avenue in San Jose. Noise is generated in this existing Caltrain right-of-way by the sounding of horns on Caltrain trains. Similarly, HSR trains would travel along the alignment and sound horns at at-grade crossings and existing Caltrain stations (see Section 3.4 for a full discussion of train noise). The horn noise from the HSR trains would have the same peak noise as the horn noise from Caltrain trains. Thus, implementation of the project alternatives would not result in a higher peak noise but would introduce more horn noise for a longer duration of time.

Trains sound the warning horns when entering stations and approaching at-grade crossings where crossing bells are also activated. While this practice would not change under the project alternatives, the number of trains operating in the corridor would increase, as would the frequency of trains sounding the warning horns. HSR operations would add an additional 134 to 176 trains per day (both directions). Train passbys and associated horn noise would be most frequent during the morning and evening peak commute times, when approximately 20 trains per hour (combined Caltrain and HSR trains) would travel in either direction through the corridor. The noise analysis in Section 3.4 assumed trains would sound the warning horns 0.25 mile before each at-grade crossing and station. The horn sounds would typically last 8 seconds. While train horns would intermittently sound upon approach to at-grade crossings or stations, the horns would be heard for a longer period when more than one at-grade crossing or station is within 0.25 mile of a receptor. For example, if two at-grade crossings and one station are within 0.25 mile of a residence, residential receptors could hear the train horn for up to 24 seconds during peak commute times, as the trains travel to or away from the park.

Adjacent land uses along the existing Caltrain corridor are already exposed to increased levels of noise from train operations (e.g., train horns) and have been since operations of the corridor commenced in the 1860s. In fact, the railroad was built first and subsequent development, including residential, commercial, and mixed-use development, was built around the railroad after it was built. Historical land use patterns suggest that the presence of trains does not curtail the continued use of residential, commercial, and mixed-use land uses around the Caltrain right-of-way. Because the noise that HSR would introduce already exists along the Caltrain right-of-way and because land uses along the Caltrain right-of-way have historically been exposed to this

noise and have continued to operate, the noise from HSR service would not cause changes in land use patterns, such as the conversion of residential land uses to other land uses. Noise relative to future development of Brisbane Baylands consistent with the Brisbane 2018 General Plan Amendment is discussed separately in the following subsection.

The modifications to stations and the additional HSR trains that would operate in the Caltrain right-of-way would introduce additional lighting and glare; however, as described in Impacts AVQ#14 and AVQ#15 in Section 3.15, project features (AVQ-IAMF#1) and downcast lighting would be implemented to limit spillover in the area. The additional lighting and glare would be minimal and would not result in a change in the existing visual character or quality. Thus, the lighting and glare is not expected to disturb existing uses in the area (e.g., residences and commercial areas) or lead to any changes in existing land use patterns. Light and glare relative to the Brisbane LMF is discussed separately in the following subsection.

Noise, Light, and Glare—Track Alignment and Light Maintenance Facility in Brisbane

Existing Land Uses

The mainline tracks used by HSR would be along the existing Caltrain track alignments and the Brisbane LMF would be adjacent to the east or west side of the Caltrain right-of-way on land that is primarily vacant with some industrial uses. Existing land uses adjacent to the East Brisbane LMF and the east side of the Caltrain right-of-way consist of light industrial facilities and warehouses, including San Francisco Recology. Existing land uses adjacent to the West Brisbane LMF and the west side of the Caltrain right-of-way consist of vacant land, several railroad-related buildings including the roundhouse and the Lazzari Fuel Company building, and some industrial warehouses and businesses along Bayshore Boulevard.

The East or West Brisbane LMF would operate 24 hours per day, and maintenance activities and vehicular traffic to the facility would introduce a new source of nighttime noise. Neither mainline increased train service, nor intermittent train movements into and out of the Brisbane LMF, nor increased traffic volume near the Brisbane LMF would contribute to or result in exceedances of standards for a severe noise impact established by the FRA (see Section 3.4 for a detailed discussion, including specifically as discussed as Impact NV#4 related to exposure of sensitive receptors to noise from the Brisbane LMF) for existing land uses and thus would not result in changes to existing land uses due to project noise.

Various buildings and facilities associated with the LMF would be lit through the night to facilitate work safety and security, contributing to increases in nighttime light levels. The primary viewers would be travelers on Bayshore Boulevard (approximately 0.1 mile from the West Brisbane LMF and 0.3 mile from the East Brisbane LMF) and residences on San Bruno Mountain (approximately 1 mile from either LMF). Lighting would be directed downward to minimize light spillover and as concluded in Impact AVQ#3, the East and West Brisbane LMF would not substantially degrade the existing visual character or quality of the site and its surroundings because these residential viewers would have a moderate sensitivity due to their distance from the LMF.

The changes in lighting and glare that would occur as a result of operation of either the East or West Brisbane LMF would be minimal and would not be expected to affect the habitability of existing uses (e.g., residences). Therefore, no substantial change in existing land use patterns is expected as a result of operation of the East or West Brisbane LMF related to noise, light and glare.

Planned Land Uses

Increased train service and operation of the East or West Brisbane LMF would introduce a new source of nighttime noise and light that would affect areas designated for planned development at the Brisbane Baylands site, including planned development (residential permitted) and planned development (residential prohibited).

The City of Brisbane has established in its General Plan and Code of Ordinances policies and requirements to minimize noise impacts on residences. Policy 183 of the General Plan requires coordination of land uses to minimize noise impacts of the Caltrain corridor. Policy 184 requires use of the State's Land Use Compatibility Guidelines to determine noise-affected uses and required noise attenuation mitigation. The Authority used the guidance from the General Plan

policies to assess the potential impact of HSR project noise on future planned land uses at the Brisbane Baylands site.

Brisbane noise standards as expressed in the community noise equivalent level, based on the state's land use compatibility guidelines, are as follows:

- Multifamily residential⁴—Normally acceptable noise levels up to 65 A-weighted decibels (dBA); conditionally acceptable noise levels up to 70 dBA; normally unacceptable up to 75 dBA; unacceptable over 75 dBA
- Hotel—Normally acceptable noise levels up to 65 dBA; conditionally acceptable noise levels up to 70 dBA; normally unacceptable up to 80 dBA; unacceptable over 80 dBA
- Office/commercial—Normally acceptable noise levels up to 70 dBA; conditionally acceptable noise levels up to 77.5 dBA; normally unacceptable over 77.5 dBA

Based on noise measurements done for the *Brisbane Baylands Draft Environmental Impact Report* (City of Brisbane 2013), existing noise levels in Brisbane were estimated as approximately 65 dBA in the middle of the area designated for planned development (residential permitted) approximately 600 feet west of the Caltrain tracks, as approximately 67 dBA in the area designated for planned development (residential prohibited) approximately 300 feet west of the Caltrain tracks, and approximately 60 dBA in the area designated for planned development (residential prohibited) approximately 500 feet east of the Caltrain tracks. Existing noise levels in areas closer to the Caltrain tracks would be higher than these measurements, as reflected in an estimated existing noise level developed for the noise impact analysis in this Draft EIR/EIS of 72 dBA approximately 40 feet west from the Caltrain tracks at the Schlage Lock project site.

Train operations would increase noise levels for areas within 40 feet of the mainline tracks up to 80 to 81 dBA. The noise associated with the Brisbane LMF would be 10 dBA or more below train operations noise associated with the mainline tracks and thus would not contribute to future noise levels. These are conservative estimates as they assume that the receptor would be within 40 feet of the tracks, near track crossovers, and near the Bayshore Caltrain Station where horns would be sounded. The conservatively estimated noise levels would exceed both the normally acceptable and conditional acceptable noise levels for residential and commercial uses per the Brisbane General Plan. This could result in a change in planned land uses by forcing development adjacent to the future track alignments to be placed further away and thus change planned land use patterns.

Lighting from either the West or East Brisbane LMF would be visible from future planned uses in adjacent areas. The maintenance building and other facilities would be lit through the night, contributing to increases in nighttime light levels. Project features (AVQ-IAMF#1) would provide lighting and building design intended to conform to the local design context. Fixed lighting sources at HSR facilities would be designed to direct light downward, minimizing light spillover, but the 24-hour operation of the LMF would require a minimum level of lighting for worker safety and security. The lighting design would limit its radiance and would not impede development of adjacent land uses in the Baylands area. Therefore, the changes in lighting and glare from operation of either the East or West Brisbane LMF would be minimal and would not be expected to affect the habitability of planned uses (e.g., residences) such that a substantial change in planned land use patterns would occur.

CEQA Conclusion

The impacts on existing land use patterns from increased noise, light, and glare associated with operation of Alternatives A and B would be less than significant under CEQA because the changes in noise, light, and glare would be similar to existing levels and would not affect the habitability of existing land uses. No mitigation is required under CEQA for this impact.

⁴ Based on the *Brisbane Baylands Draft Environmental Impact Report* (City of Brisbane 2013), residential uses at the Brisbane Baylands site are likely to be multifamily residential and not single-family residential.

The impacts on planned land use patterns from increased noise associated with operation of Alternatives A and B would be significant under CEQA because increased train service would result in noise levels that exceed the conditionally acceptable noise limits established in the Brisbane General Plan and could result in a change in planned land use patterns by pushing planned development further out from the mainline track alignments. The mitigation measure to address this impact is identified in Section 3.13.9. Section 3.13.7, Mitigation Measures, describes the measure in detail.

The impacts on planned land use patterns from increased light and glare associated with operation of Alternatives A and B would be less than significant under CEQA because project lighting features would require LMF lighting to conform to the local design context and directed downward to avoid spillover into adjacent areas. No mitigation is required under CEQA for this impact.

3.13.6.3 Conflict with BCDC Bay Plan Policies

Impact LU#7 focuses on the environmental impacts due to potential conflict with shoreline band policies, including policies regarding priority use areas, related to the project's uses within the shoreline bands of Brisbane Lagoon, Visitacion Creek, and Guadalupe Valley Creek. Sections 3.7 and 3.8 of this Draft EIR/EIS include an analysis of the potential physical impacts from fill on Visitacion Creek and Guadalupe Valley Creek; as such, the potential impact from fill of a portion of Visitacion Creek and a portion of Guadalupe Valley Creek are not discussed here. BCDC will determine whether the proposed project is consistent with the Bay Plan policies concerning fill of the Bay and tidally influenced waterways.

Construction and operation of the project could conflict with BCDC Bay Plan policies related to uses within the shoreline band relative to Visitacion Creek, Guadalupe Valley Creek, and the northern side of Brisbane Lagoon, including uses within priority use areas on the northern side of Brisbane Lagoon. Portions of the BCDC jurisdiction for Mission Creek, Islais Creek, the area west of Brisbane Lagoon, Oyster Point Channel, Colma Creek, and El Zanjon Creek extend across the Caltrain right-of-way, which is actively being used for railway operations. The project would use existing tracks and bridges at these locations and would not require placement of fill or structures within jurisdictional areas or result in encroachment within a shoreline band, including priority use areas. Thus, no impacts would occur at these other locations and they are not discussed further.

Impact LU#7: Conflict with BCDC Shoreline Band Policies

This analysis is presented in two parts. The first part of this analysis concerns the project's impact on areas within a priority use area in the shoreline band. The second part of this analysis concerns the project's impact on areas within the shoreline band that have not been designated for priority uses.

Permanent Alteration of Priority Use Area within the Shoreline Band

Both of the project alternatives would include the placement of a roadway within the BCDC priority use area within the shoreline band of Brisbane Lagoon, introducing activities that would be inconsistent with the designated land uses for the area, as identified in the BCDC Bay Plan. Figure 3.13-14 and Figure 3.13-15 depict the impacts on BCDC planned uses within the priority use area due to Alternatives A and B, respectively. The priority use area in which project activities would occur is in the northern portion of Brisbane Lagoon. This priority use area is identified in the BCDC Bay Plan as a priority use area for "waterfront park, beach" use. There are no current plans to develop a park in this priority use area within the shoreline band; however, because this land use is designated in the Bay Plan, this analysis considers the potential impact of the project on the priority use area.



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Figure 3.13-14 Project Features within BCDC Priority Use Area, Northern Brisbane Lagoon (Alternative A)



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Figure 3.13-15 Project Features within BCDC Priority Use Area, Northern Brisbane Lagoon (Alternative B)

The northern portion of the priority use area in the shoreline band of Brisbane Lagoon mostly includes vegetated areas. Within this priority use area, both project alternatives would require the construction of a new permanent roadway to accommodate the realignment of Lagoon Road and its connection to the realigned Tunnel Avenue and Tunnel Avenue overpass. The relocation of Lagoon Road within the priority use area would not be consistent with the uses reserved for this priority use area, which include camping facilities accessible to boaters; public boat launching facilities; facilities that emphasize hiking, bicycling, riding trails, picnic facilities, swimming, environmental, historical and cultural education and interpretation, viewpoints, beaches, and fishing; and trails. The expansion of roadway in this designated priority use area for a future park would conflict with the BCDC Bay Plan because it would reduce the area available for a future park, which is the designated use for this area.

Permanent Alteration of Other Areas within the Shoreline Band

There are three areas where the project would place project features within a shoreline band outside of a priority use area. The following subsections discuss each area. Relative to these new project uses within the shoreline band, the project, as currently designed, does not include public access improvements to or along Brisbane Lagoon (which is considered part of San Francisco Bay under the Bay Plan) or San Francisco Bay itself.

Brisbane Lagoon

As illustrated on Figure 3.13-14 and 3.13-15, both alternatives would include project components within the shoreline band of Brisbane Lagoon that are outside of a priority use area. Both alternatives would remove portions of the Tunnel Avenue overcrossing that are in the shoreline band of Brisbane Lagoon. This would not be considered new use of the shoreline band because the project would actually be removing a roadway from the shoreline band. The removal of the Tunnel Avenue overpass would not result in any conflicts with the Bay Plan. However, the realignment of Lagoon Road would place a roadway on the shoreline band of Brisbane Lagoon (outside of a priority use area).

Visitacion Creek

The East Brisbane LMF (Alternative A) would place project features within the shoreline band of Visitacion Creek. The East Brisbane LMF (Alternative A) would require placing a portion of Visitacion Creek into an underground culvert. A new maintenance facility yard, workshop, parking lot and access road, and realigned Tunnel Avenue would be built above the underground culvert and would result in new uses within the shoreline band of Visitacion Creek.

Guadalupe Valley Creek

Both project alternatives would be located in the shoreline band jurisdiction associated with Guadalupe Valley Creek. Portions of the shoreline band of Guadalupe Valley Creek extend across the existing railbed; existing roadways (Tunnel Avenue and Bayshore Boulevard); and vegetated areas around the roadways and Guadalupe Valley Creek.

The project would result in the permanent removal of some existing roadway infrastructure within the shoreline band jurisdiction of Guadalupe Valley Creek due to the removal of the Tunnel Avenue overcrossing. The project would also result in the permanent introduction of project rail and roadway improvements into the shoreline band of Guadalupe Valley Creek. Both project alternatives would remove the existing Tunnel Avenue overpass, which consists of columns placed within the shoreline band of Guadalupe Valley Creek and an elevated roadway over the shoreline band jurisdiction associated with Guadalupe Valley Creek. This would result in the removal of a portion of a roadway extending over the shoreline band jurisdiction associated with Guadalupe Valley Creek. Additionally, both project alternatives would horizontally shift existing tracks, relocate OCS poles and wires, and relocate the southern terminus of the new Tunnel Avenue overpass to the Bayshore Boulevard/Valley Drive intersection within the shoreline band of Guadalupe Valley Creek. Both project alternatives would place project features within the shoreline band of Guadalupe Valley Creek (outside of a priority use area).

Permanent Alteration of Priority Use Areas outside the BCDC Shoreline Band of Brisbane Lagoon (For Advisory Purposes)

The project alternatives would also place project features within a portion of the priority use area outside the shoreline band of Brisbane Lagoon (illustrated on Figures 3.13-14 and 3.13-15). This information is included for advisory purposes because this area is outside BCDC’s shoreline band. Project activities in this area would include the following:

- A portion of the Tunnel Avenue overcrossing is currently within the priority use area, but outside the shoreline band. With implementation of either project alternative, the Tunnel Avenue overcrossing would be removed from these areas, which would increase the area available for a future park, as designated in the Bay Plan.
- Alternative A would introduce new lead tracks and OCS poles and wires connecting to the East Brisbane LMF (illustrated on Figure 3.13-14) within a vegetated area adjacent to Tunnel Avenue within the priority use area outside of the shoreline band.
- Alternative B would include the relocation of utilities (illustrated on Figure 3.13-15) within the priority use area outside of the shoreline band.

CEQA Conclusion

The impact under CEQA associated with the permanent alteration of a BCDC priority use area within the shoreline band would be significant for both project alternatives because the realignment of Lagoon Road would introduce a land use that would be inconsistent with the BCDC Bay Plan, which was adopted, in part, for the purpose of avoiding and mitigating environmental effects. Both alternatives would reduce the area available for a future waterfront park, which the Bay Plan designates as a reserved use for the area. A mitigation measure to address this impact is identified in Section 3.13.9. Section 3.13.7 describes the measures in detail.

The impact under CEQA associated with project development within the shoreline band would be significant for both project alternatives because they would not be consistent with the BCDC policy requiring that the project provide for maximum public access to the Bay and the shoreline. As designed, neither project alternative provides maximum feasible public access to the Bay and the shoreline. A mitigation measure to address this impact is identified in Section 3.13.9. Section 3.13.7 describes the measure in detail.

3.13.6.4 Inducement of Population Growth Beyond Planned Levels

Construction and operation of the project could induce population growth that exceeds planned levels. Increases in population could result from increased development density beyond planned levels and increased employment opportunities as a result of the project.

No Project Impacts

Section 3.17 identifies the conditions of the No Project Alternative, including the development patterns and policies that accommodate future population growth. Table 3.13-6 shows the RSA county population estimates for 2015 and projections for 2040. As summarized in Section 3.17, under the No Project Alternative, the station areas are expected to be in high demand for development and are capable of achieving extensive growth over the coming decades.

Project Impacts

Construction Impacts

Impact LU#8: Temporary Induced Population Growth

As discussed in Section 3.17, construction of the project would result in direct and indirect employment within the RSA during the 4.5-year period in which construction would take place. The existing regional labor force is anticipated to be sufficient to fill the demand for HSR construction workers. As a result, it is anticipated that most construction workers would be locals that would commute to the construction site, rather than relocate to the project vicinity solely in pursuit of temporary HSR construction jobs. Minimal induced population growth is anticipated

during construction. Construction of the project would, therefore, not induce substantial population growth beyond planned levels.

CEQA Conclusion

The impact on population growth from temporary employment opportunities generated by project construction would not exceed planned levels and would therefore be a less-than-significant impact under CEQA. As described in Section 3.17, the increase in direct and indirect employment would not be substantial in the context of the RSA and a substantial number of people would not relocate to the RSA during construction. This small increase in the population would not be substantial in the context of the region's overall economy. Therefore, CEQA does not require any mitigation.

Operations Impacts

Impact LU#9: Permanent Induced Population Growth

As described in Section 3.17, project operations could induce population growth from operations-related employment but mostly from induced population growth due to improved accessibility. Taking into consideration population growth associated with both increased accessibility and O&M employment, project operations are anticipated to generate induced growth of approximately 6,560 people within the three-county region by 2040. This induced growth would add about 0.15 percent to the total projected population in the region under either project alternative. This induced population growth is anticipated to be concentrated in station areas in downtown San Francisco and Millbrae. San Francisco, Millbrae, and San Jose have station area plans in effect that accommodate TOD. The induced population growth from the project would be TOD and is, therefore, considered planned growth. The increase in employment would benefit the local economy, and because the adopted station area and specific plans encourage TOD and take into consideration HSR service, project operation under Alternatives A and B would not induce growth beyond planned levels. Thus, the project would not induce development intensity beyond planned levels.

CEQA Conclusion

The induced population growth due to increased intercity accessibility and employment generated by the project would not exceed planned levels and would therefore be a less-than-significant impact under CEQA. Population increases associated with increased accessibility at station areas have been anticipated in the station areas plans for these sites; consequently, these increases would not substantially exceed planned levels. Therefore, CEQA does not require any mitigation.

3.13.7 Mitigation Measures

Significant impacts under CEQA would occur under both project alternatives due to the permanent alteration of existing and planned land use patterns from construction of the Millbrae Station and Brisbane LMF, the incompatibility of the Brisbane LMF with planned development during construction and operations, operational noise impacts on planned development in Brisbane due to increased train service, and potential conflicts with BCDC Bay Plan shoreline band policies. Mitigation measures must be considered for Impacts LU#4, LU#5, LU#6, and LU#7 for both alternatives.

Potential mitigation measures for the Millbrae Station could include relocating the surface parking west of the station to a different area; however, this is not feasible because there is no available land adjacent to the Millbrae Station where the parking could be relocated. Plans for TOD in the area could be revised, but that decision must be made by the City of Millbrae. The Authority has been coordinating with local jurisdictions throughout the development of the project to minimize impacts on existing and planned development; however, at this time no feasible mitigation measures have been identified to reduce the impact on the alteration of existing and planned land use patterns in Millbrae.

Potential mitigation measures for the Brisbane LMF could include relocating the LMF to a different area; however, this is not feasible. There are a limited number of available sites near the exiting Caltrain right-of-way that could potentially accommodate an LMF because of the dense

urban development throughout the Project Section. No other sites have been identified to be practicable to support the activities required for the LMF. The Authority has been coordinating and intends to continue coordinating with the City of Brisbane and the developers for Brisbane Baylands, to minimize impacts on existing and planned development; however, at this time no feasible mitigation measures have been identified to reduce the impact on the alteration of existing and planned land use patterns in Brisbane.

To mitigate potential impacts related to noise on planned land uses (e.g., areas designated in the General Plan as planned development [residential permitted] and planned development [residential prohibited]) in Brisbane, LU-MM#1 would be implemented. To mitigate potential impacts related to improvements located within a priority use area within BCDC's shoreline band, LU-MM#2 would be implemented. To mitigate potential impacts related to improvements within BCDC's shoreline band (outside of a priority use area), LU-MM#3 would be implemented.

LU-MM#1: Implement Noise Mitigation in Conjunction with Land Use Development in Brisbane

Several options exist to address the noise impacts on planned land uses without resulting in changes in land use patterns in Brisbane. These include noise barriers, building insulation, and building location.

The performance standards for noise mitigation are those established by the City of Brisbane General Plan as follows:

- Residential/Hotel:
 - Exterior areas: normally acceptable noise levels up to 65 dBA (without building insulation); conditionally acceptable noise levels of 70 dBA (may require building insulation)
 - Interior area: noise levels of 45 dBA
- Commercial/office exterior areas: normally acceptable noise levels up to 70 dBA (without building insulation); conditionally acceptable noise levels up to 77.5 dBA (may require building insulation)

The specific mitigation would be developed in consultation with the City of Brisbane and the site developer, since the specific designs for adjacent development are still in progress. This mitigation is only required to address noise resultant from HSR operations, and not other existing or future noise sources.

Noise Barriers

Prior to HSR operations adjacent to residential or commercial development in Brisbane, the Authority would install noise barriers where noise levels would not meet the performance standards for mitigation. The primary requirements for an effective noise barrier are that the barrier must (1) be high enough and long enough to break the line-of-sight between the sound source and the receiver, (2) be of an impervious material with a minimum surface density of 4 pounds per square foot, and (3) not have any gaps or holes between the panels or at the bottom. Because many materials meet these requirements, aesthetics, durability, cost, and maintenance considerations usually determine the selection of materials for noise barriers.

Modelling of noise barriers (up to 16 feet in height) in planned land use areas at Brisbane indicate that noise barriers could reduce noise in mixed-use areas (residential allowed) within 40 feet of the mainline tracks to 66 dBA and 68 dBA for first and second floors and in areas designated as planned development (residential prohibited) within 40 feet of the mainline tracks to 65 dBA and 67 dBA for first and second floors. These levels would be conditionally acceptable (with insulation) for residential development and normally acceptable for commercial uses. Noise barriers (up to 16 feet in height) would only reduce noise 1 to 3 dBA for third floors, which may result in unacceptable noise levels for residential uses without additional measures.

Depending on the situation, noise barriers can become visually intrusive. Typically, the noise barrier style would be selected with input from the local jurisdiction to reduce the visual effect of

barriers on adjacent lands uses, refer to *Aesthetic Options for Non-Station Structures* (Authority 2017). For example, noise barriers could be solid or transparent, and made of various colors, materials, and surface treatments.

Berm and berm/wall combinations are the preferred types of noise barriers where space and other environmental constraints permit. On aerial structures, barrier material would be limited by engineering weight restrictions for barriers on the structure. All noise barriers would be designed to be as low as possible to achieve a substantial noise reduction.

Noise barriers on both aerial structures and at-grade structures could consist of solid, semitransparent, or transparent materials as defined in *Aesthetic Options for Non-Station Structures* (Authority 2017). Volume 2, Appendix 3.4-B, Noise and Vibration Mitigation Guidelines, provides more details.

Install Building Sound Insulation

The Authority would provide sound insulation as an additional mitigation measure where necessary to meet the interior noise performance standard. Substantial improvements in building sound insulation (on the order of 5 to 10 dBA) can often be achieved by adding an extra layer of glazing to windows, by sealing holes in exterior surfaces that act as sound leaks, and by providing forced ventilation and air conditioning so that windows do not need to be opened. With noise barriers and building sound insulation, residential uses within 40 feet of the tracks can be conditionally acceptable for first and second floors but may not be for third floors. With noise barriers and building sound insulation, commercial uses can be conditionally acceptable.

Secondary Impacts of Implementing Noise Barriers and Building Sound Insulation

Noise barriers could have secondary impacts on visual aesthetics and require tree or vegetation removal. Depending on their design, height, and location, noise barriers can become visually intrusive, blocking views or creating places for unwanted graffiti. Within Brisbane, noise barriers would be installed along the existing Caltrain right-of-way. As part of the final design and construction management plan, the Authority would work with Brisbane and the site developer to identify the appropriate noise barrier style and treatments for visually sensitive areas and to reduce the visual effect of barriers on adjacent land uses. For example, noise barriers could be solid or transparent, made of various colors, materials, and surface treatments, screened with vegetation, or treated with surface coatings to facilitate cleaning and removal of graffiti. Providing sound insulation would involve modest building retrofit activity like routine residential or commercial window modifications or insulation replacement and would not result in significant secondary effects.

Building Location

Noise barriers and building insulation would be able to reduce noise levels for residential and commercial uses within 40 feet of the tracks on the first and second floors as well as third floors for commercial uses. Noise levels within 40 feet of the tracks for third-floor residences may still be unacceptable if noise barriers are limited to 16 feet. In mixed-use areas, commercial uses could be placed closer to the tracks to buffer residential uses and/or residential uses could be set back from track areas to attenuate noise from trains to a conditionally acceptable level.

LU-MM#2: Relocate Lagoon Road to Avoid Priority Use Areas within BCDC's Jurisdiction

The Authority would relocate Lagoon Road north from its existing location to avoid the priority use area within BCDC's jurisdiction, as illustrated on Figure 3.13-16. A connection to Sierra Point Parkway would be retained.



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Figure 3.13-16 Realignment of Lagoon Road with Mitigation Measure LU-MM#2

This mitigation measure would be effective in avoiding the priority use area within BCDC's jurisdiction for both project alternatives. Implementing LU-MM#2 would result in secondary impacts on aquatic resources that would be greater in magnitude than the proposed project alternatives, due to temporary and permanent impacts on two constructed water basins adjacent to the realigned Lagoon Road. These secondary impacts on aquatic resources would be mitigated to a less-than-significant level under CEQA through application of BIO-MM#36: Restore Aquatic Resources Subject to Temporary Impacts (described in Section 3.7).

LU-MM#3: Shoreline Access Improvements in Brisbane

The Authority would provide for additional and enhanced public access consistent with the Bay Plan's requirements to increase public access to the Bay to the maximum extent feasible, by building and providing for maintenance of the following:

- A new bike/pedestrian path approximately where Lagoon Road currently exists along the northern edge of Brisbane Lagoon and south of the proposed LMF between Sierra Point Parkway and Tunnel Avenue.
- An extension of the Bay Trail from Candlestick State Recreation Area at the intersection of Alanna Way and Thomas Mellon Circle west along Alanna Way under US 101 then southward to cross Beatty Avenue and then southward west of US 101 to just north of Brisbane Lagoon where it would connect with the new Lagoon Road bike/pedestrian path.

These proposed shoreline access improvements may continue to be refined in coordination with BCDRC throughout the environmental process.

The new bike/pedestrian path would be in previously developed areas consisting of the following, from north to south: (1) Alanna Way; (2) landscaped areas along Alanna Way; (3) Beatty Avenue; (4) access roads on the west side of the landfill; (5) ruderal grassland areas of the prior landfill along the east and south sides of the landfill; Lagoon Road; and ruderal grassland areas along Lagoon Road. There is one waterway crossing (Visitacion Creek) where the Bay Trail extension would cross on an existing culvert, thus avoiding fill within the creek. Near Visitacion Creek there are some drainage ditches with associated wetland vegetation, but these ditches could be avoided by placing the trail in the upland areas along the existing roads. The ruderal grassland areas do not contain sensitive habitat for special-status species. All relevant biological resource mitigation identified for project construction within similar habitat areas for the proposed project would apply to access improvement construction. Construction would result in temporary disruption of small portions of Alanna Way, Beatty Avenue, and Lagoon Road, but this disruption would not result in safety impacts or emergency access limitations by applying standard traffic control requirements. There are no sensitive receptors adjacent to the trail alignment, so no temporary effects due to construction air or noise emissions would occur. There may be limited disturbance of prior landfill materials; all relevant construction controls for work within the landfill for the proposed project would apply to trail construction. Operationally, bicycle and pedestrian use of the trail would not result in significant impacts on biological resources given the previously developed nature of the trail environs and the temporary nature of human transit along the trail. The trail would consist of at-grade paved and unpaved trail and signage and thus would not have any significant aesthetic impacts. Accordingly, implementation of LU-MM#3 would not result in any significant secondary impacts on the environment with the application of relevant construction controls and mitigation.

3.13.8 Impact Summary for NEPA Comparison of Alternatives

As described in Section 3.1.5.4, the impacts of project actions under NEPA are compared to the No Project condition when evaluating the impact of the project on the resource. The determination of impact is based on the context and intensity of the change that would be generated by construction and operation of the project. Table 3.13-14 compares the project impacts by alternative, followed by a summary of the impacts.

Table 3.13-14 Comparison of Project Alternative Impacts for Station Planning, Land Use, and Development

Impact	Alternative A	Alternative B
Alteration of Land Use Patterns		
Impact LU#1: Temporary Alteration of Land Use Patterns from Land Use Conversion and Introduction of Incompatible Land Uses	Construction of the project would temporarily convert 112.6 acres. Lands would be restored to their pre-construction condition, and land use patterns would not be substantially altered.	Similar to Alternative A, but construction of the project would temporarily convert 99.8 acres under Alternative B (Viaduct to I-880) and 117.8 acres under Alternative B (Viaduct to Scott Boulevard).
Impact LU#2: Temporary Alteration of Land Use Patterns from Increased Traffic, Noise, Air Quality Emissions, and Visual Changes	Construction would result in temporarily increased noise levels, dust and other air pollutants, traffic, temporary visual changes that would affect adjacent land uses. Project features would provide continuous property access by maintaining traffic flow; managing fugitive dust emissions, noise, and vibration; and restoring construction staging areas to their original condition. Therefore, construction would not prevent the continued use of adjacent properties or introduce conditions incompatible with adjacent uses that would trigger temporary or permanent relocations or conversions that would result in substantial changes to land use patterns.	Temporarily increased noise levels, dust and other air pollutants, traffic, and visual changes associated with construction of Alternative B would be greater than those experienced under Alternative A because the West Brisbane LMF would be closer to the Schlage Lock project (under construction), and because of the greater levels of construction activity required for construction of the passing tracks and the viaduct. Similar to Alternative A, project features would provide continuous property access by maintaining traffic flow; managing fugitive dust emissions, noise, and vibration; and restoring construction staging areas to their original condition. Therefore, no substantial changes to land use patterns would occur.
Impact LU#3: Permanent Alteration of Land Use Patterns from Land Use Conversion and Introduction of Incompatible Land Uses along Track Alignment	Construction would result in the permanent conversion of 84.0 acres. Land use conversion would not cause an inherent incompatibility in land use, and existing adjacent land uses would continue, avoiding altered land use patterns.	Construction would result in the permanent conversion of 98.0 acres under Alternative B (Viaduct to I-880) and 93.1 acres under Alternative B (Viaduct to Scott Boulevard). Land use conversion would not cause an inherent incompatibility in land use, and existing adjacent land uses would continue, avoiding altered land use patterns.

Impact	Alternative A	Alternative B
<p>Impact LU#4: Permanent Alteration of Land Use Patterns from Land Use Conversion and Introduction of Incompatible Uses at Stations</p>	<p>The 4th and King Street Station modifications would be in an area with existing and planned transportation land uses and would not impede existing or planned land use patterns. Construction would result in the permanent conversion of 1.9 acres for the HSR modifications to the 4th and King Street Station and 7.8 acres for the HSR modifications to Millbrae Station. Construction of the Millbrae Station modification would result in the permanent alteration of existing land use patterns from conversion of commercial buildings to transportation uses. Also, construction of the Millbrae Station modifications would result in the permanent alteration of planned land use patterns because the Millbrae Station modifications would conflict with the planned Millbrae Serra Station Development project. Construction would result in the permanent conversion of 45.5 acres for the HSR modifications to the San Jose Diridon Station. The San Jose Diridon Station modifications would be at the urbanized site of an existing transit facility and would not impede existing or planned land use patterns.</p>	<p>Same as Alternative A for the 4th and King Street and Millbrae Stations. Modifications to the San Jose Diridon Station would require the permanent conversion of 56.4 acres.</p>
<p>Impact LU#5: Permanent Alteration of Land Use Patterns from Land Use Conversion at the Brisbane Light Maintenance Facility</p>	<p>Construction of the East Brisbane LMF would not result in an impact on existing land use patterns because the East Brisbane LMF would be in an area that is predominantly vacant and industrial and would not permanently alter existing commercial, industrial, development under construction (Schlage Lock project), public facilities, parks/open space, and transportation land uses. Construction of the East Brisbane LMF would result in an impact on planned land use patterns because the East Brisbane LMF would result in the permanent acquisition of 93.3 acres of land planned for planned development (residential prohibited).</p>	<p>Construction of the West Brisbane LMF would result in a potential permanent alteration of existing land use patterns, due to the permanent alteration of Icehouse Hill. Construction of the West Brisbane LMF would result in an impact on planned land use patterns because the West Brisbane LMF would result in the permanent acquisition of 90.1 acres of land planned for planned development (residential prohibited) and 20.7 acres of land planned development (residential permitted).</p>

Impact	Alternative A	Alternative B
Impact LU#6: Permanent Alteration of Land Use Patterns from Increased Noise, Light and Glare	<p>Project operations along the guideway and at stations would not generate substantial increases in noise or light and glare that would result in the alteration of existing land use patterns.</p> <p>Increased train service in Brisbane would result in noise levels that exceed Brisbane General Plan noise compatibility standards and could result in substantial change in planned land use patterns by moving development further from the mainline tracks.</p> <p>Operation of the Brisbane LMF would not substantially change planned land use patterns because project light and glare from the LMF would be minimized by lighting design features.</p>	Same as Alternative A.
Conflict with BCDC Bay Plan Shoreline Band Policies		
Impact LU#7: Conflict with BCDC Shoreline Band Policies	<p>The realignment of Lagoon Road would result in a substantial change in land uses designated in the BCDC Bay Plan for this priority use area because the project would introduce a roadway in an area identified for a waterfront park.</p> <p>Development within the Brisbane Lagoon, Guadalupe Valley Creek, and Visitacion Creek shoreline bands (outside of a priority use area) would be inconsistent with BCDC Bay Plan policies, because the project would not provide maximum feasible public access to the Bay and the shoreline.</p>	Similar to Alternative A, except Alternative B would not affect the shoreline band of Visitacion Creek.
Inducement of Population Growth beyond Planned Levels		
Impact LU#8: Temporary Induced Population Growth	Population growth that might be induced by increased employment opportunities for construction would not exceed planned levels.	Population growth that might be induced by increased employment opportunities for construction would not exceed planned levels.
Impact LU#9: Permanent Induced Population Growth	Taking into consideration population growth associated with both increased accessibility and operation and maintenance employment, project operations are anticipated to generate induced growth of approximately 6,560 people within the three-county region by 2040. This would add about 0.15% to the region's population. Because the adopted station area and specific plans encourage TOD and plan for HSR service, project operation would not induce growth beyond planned levels.	Same as Alternative A

HSR = high-speed rail
 I- = Interstate
 LMF = light maintenance facility
 TOD = transit-oriented development

Alteration of Land Use Patterns

Construction of the project would require the temporary use of land outside the Caltrain right-of-way. Alternative A would require 112.6 acres of temporary use of land outside of the right-of-way, compared to 99.8 acres under Alternative B (Viaduct to I-880) and 117.8 acres under Alternative B (Viaduct to Scott Boulevard). The main differences in TCEs between Alternatives A and B is due to the differences between the East and West Brisbane LMF, and due to the additional project elements that would be built under Alternative B (passing track and viaduct). Land needed for TCEs would be leased from the landowner, taken out of its existing use, and used temporarily for construction over a period of 2 to 4.5 years depending on the location. Land use conversions would be temporary and would be restored to pre-construction conditions once construction has ceased, preventing adjacent incompatible land uses leading to alteration of land use patterns.

Construction of the project would result in temporary indirect impacts on land use patterns from increased noise levels, dust and other air pollutants, traffic, and temporary visual changes. These construction-related impacts would be greater under Alternative B due to the closer proximity of the West Brisbane LMF to the Schlage Lock project, which is under construction, and due to the greater levels of construction activity required for construction of the passing tracks and viaduct relative to Alternative A. Project features identified in Sections 3.2, 3.3, 3.4, and 3.15 would be implemented during construction and would minimize or avoid incompatibility of construction with adjacent land uses by providing continuous property access for residences and businesses, maintaining traffic flow in construction areas, minimizing fugitive dust emissions, minimizing impacts from noise and vibration, and restoring construction staging areas to their original condition after construction is completed. Construction of the alternatives would not prevent the continued use of adjacent properties or introduce conditions incompatible with adjacent uses that would trigger temporary or permanent relocations or conversions that would result in substantial changes to land use patterns.

Permanent land acquisitions would primarily occur within existing transportation rights-of-way and would represent small acquisitions along the entire alignment. Modifications along the track alignment for Alternative A would require the permanent conversion of 84.0 acres. Modifications along the track alignment for Alternative B (Viaduct to I-880) would require 98.0 acres. Modifications along the track alignment for Alternative B (Viaduct to Scott Boulevard) would require 93.1 acres. The primary reason for this difference is that Alternative B would include passing tracks and a viaduct, which would not be built as part of Alternative A. However, both alternatives would not result in the permanent alteration of land use patterns because the project would be within an existing railroad corridor and because existing land uses are already near the existing railroad corridor.

HSR modifications to the 4th and King Street Station and Millbrae Station would be the same for both alternatives, so the impacts for these stations would be the same for both alternatives. HSR modifications to the San Jose Diridon Station would vary between the at-grade station under Alternative A and the aerial station under Alternative B, but impacts at this station would be similar for both alternatives. The 4th and King Street Station modifications would be in an area with existing and planned transportation land uses and would not impede existing or planned land use patterns. The San Jose Diridon Station would require the conversion of 45.5 acres under Alternative A and 56.4 acres under Alternative B; however, the modifications would be at the urbanized site of an existing transit facility and would not impede existing or planned land use patterns. The Millbrae Station would require permanent conversion of 7.8 acres under both alternatives. Construction of the Millbrae Station modifications would result in a substantial change in existing land uses due to the conversion of commercial buildings to transportation uses. Construction of the Millbrae Station modifications would also result in a substantial change in planned land use patterns by conflicting with the planned Millbrae Serra Station Development project.

Construction of the East Brisbane LMF (Alternative A) would not result in the permanent alteration of existing land uses because the East Brisbane LMF would be in an area that is predominantly vacant and industrial and would not permanently alter existing commercial,

industrial, development under construction (Schlage Lock project), public facilities, parks/open space, and transportation land uses. However, construction of the West Brisbane LMF (Alternative B) would result in a permanent alteration of existing land use patterns, due to the permanent alteration of Icehouse Hill. Construction of the East or West Brisbane LMF would reduce the amount of land available for planned development on Brisbane Baylands by permanently converting land that is designated planned development (residential prohibited). The East Brisbane LMF (Alternative A) would affect 93.3 acres of planned commercial development (residential prohibited) and the West Brisbane LMF (Alternative B) would affect 90.1 acres of planned commercial development (residential prohibited). This would be a substantial change in planned land use patterns. In addition, construction of the West Brisbane LMF (Alternative B) would convert 20.7 acres of land that is planned for a combination of commercial and residential development (residential permitted) to a transportation land use. This would be a substantial change in planned land use patterns.

The realignment of Lagoon Road under both alternatives would be in an area designated by the BCDC Bay Plan as a priority use area for a future park within BCDC's jurisdiction. The realignment of Lagoon Road would introduce a roadway in an area reserved for a waterfront park. Thus, this would reduce the area available for such a park, which would be inconsistent with the BCDC Bay Plan. The Authority has identified available mitigation which would avoid this incompatibility with the uses reserved for this priority use area designated by the Bay Plan. Furthermore, the project includes development within the shoreline bands (outside of a priority use area) of Brisbane Lagoon, Guadalupe Valley Creek, and Visitacion Creek (only Alternative A). The BCDC Bay Plan indicates that the sole basis on which BCDC may deny an application for a permit, for proposed activities within the shoreline band but outside of a priority use area, is that the project fails to provide maximum feasible public access to the bay and the shoreline. The Authority has identified available mitigation, which would provide public access to the bay and the shoreline through the construction of a new bicycle/pedestrian trail that would provide enhanced public access to Brisbane Lagoon and the bay. With implementation of this mitigation, the project would result in a net increase in public access, relative to existing conditions.

Project operations would introduce some additional noise, light, and glare along the existing rail corridor, but the adjacent existing land uses are already exposed to increased levels of noise, light, and glare from existing Caltrain train operations, and HSR train noise, light, and glare would be intermittent and of short duration at any given location. Thus, this increase in noise, light, and glare is not expected to negatively affect the habitability of existing land uses and no substantial change in existing land use patterns is expected as a result of operation of Alternatives A and B. Operation of both project alternatives would not substantially change planned land use patterns with respect to additional light and glare because lighting design at the Brisbane LMF would minimize light spillover. Increased train service in the Brisbane area would result in noise levels that exceed the City of Brisbane's General Plan noise compatibility standards. The Authority has identified mitigation in the form of noise barriers, building insulation and building location requirements that would reduce noise levels for future planned land use to meet the City of Brisbane's General Plan noise compatibility standards and thus noise impacts, as mitigated, would not result in a substantial change in land use patterns. As a result, operations of the East or West Brisbane LMF would not affect planned land uses such that a substantial change in land use patterns would occur.

Induced Population Growth

Construction of the guideway, station modifications, and Brisbane LMF would generate construction employment during the 4.5-year construction period. As the existing regional labor force is anticipated to be sufficient to fill the demand for HSR construction workers, minimal induced population growth is anticipated during construction. The small increase in the population would not be substantial in the context of the region's overall economy.

Taking into consideration population growth associated with both increased accessibility and operation and maintenance employment, project operations are anticipated to generate induced growth of approximately 6,560 people within the three-county region by 2040. This would add

about 0.15 percent to the region's population. This induced growth would not be considered substantial or exceed planned levels. The increase in employment would be beneficial to the local economy, and because the adopted station area and specific plans encourage TOD and take into consideration HSR service, project operation under Alternatives A and B would not induce growth beyond planned levels.

3.13.9 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 3.13-15 identifies the CEQA significance conclusions for each impact discussed in Section 3.13.6. A summary of the significant impacts, mitigation measures, and factors supporting the significance conclusions after mitigation follows the table.

Table 3.13-15 CEQA Significance Conclusions and Mitigation Measures for Station Planning, Land Use, and Development

Impacts	Impact Description and CEQA Level of Significance before Mitigation	Mitigation Measure	CEQA Level of Significance after Mitigation
Alteration of Land Use Patterns			
Impact LU#1: Temporary Alteration of Land Use Patterns from Land Use Conversion or Introduction of Incompatible Land Uses	Less than significant for both project alternatives: Use of land for construction activities would be temporary and would not result in substantial changes to land use patterns.	No mitigation measures are required	N/A
Impact LU#2: Temporary Alteration of Land Use Patterns from Increased Traffic, Noise, Air Quality Emissions, and Visual Changes	Less than significant for both project alternatives: Residents and businesses would not likely be relocated due to the temporary dust, noise or traffic that would accompany construction. Project features would minimize impacts by providing continuous property access, maintaining traffic flow, minimizing fugitive dust emissions, minimizing impacts from noise and vibration, and restoring construction staging areas to their original condition after construction.	No mitigation measures are required	N/A
Impact LU#3: Permanent Alteration of Land Use Patterns from Land Use Conversion and Introduction of Incompatible Uses along Track Alignment	Less than significant for both project alternatives: Permanent conversion of land to transportation-related uses along the track alignment would not cause an inherent incompatibility in land use because the project would be within an existing railroad corridor and because existing land uses are already near the existing railroad corridor.	No mitigation measures are required	N/A

Impacts	Impact Description and CEQA Level of Significance before Mitigation	Mitigation Measure	CEQA Level of Significance after Mitigation
Impact LU#4: Permanent Alteration of Land Use Patterns from Land Use Conversion and Introduction of Incompatible Uses at Stations	Significant for both project alternatives: Construction of the Millbrae Station HSR modifications would result in a substantial change in existing land uses due to the conversion of commercial buildings to transportation uses. Construction of the Millbrae Station modifications would also result in a substantial change in planned land use patterns by conflicting with the planned Millbrae Serra Station Development project.	No mitigation measures are available	Significant and Unavoidable
Impact LU#5: Permanent Alteration of Land Use Patterns from Land Use Conversion at the Brisbane Light Maintenance Facility	Significant for both project alternatives: Construction of the East or West Brisbane LMF would result in the permanent acquisition of lands designated as planned development (residential prohibited). Construction of the West Brisbane LMF (Alternative B) would also result in the permanent acquisition of lands designated as planned development (residential permitted). These acquisitions would be considered a substantial alteration of planned land use patterns. In addition, the West Brisbane LMF (Alternative B) would grade Icehouse Hill, which is a prominent area for habitat. This would be considered a permanent and significant alteration of an existing land use.	No mitigation measures are available	Significant and Unavoidable
Impact LU#6: Permanent Alteration of Land Use Patterns from Increased Noise, Light and Glare	Significant for both project alternatives: Project operations along the guideway and at stations would not generate substantial increases in noise or light and glare that would result in the alteration of existing land use patterns. Increased train service would result in noise levels in Brisbane that exceed the City of Brisbane General Plan noise compatibility standards and could result in an alteration of planned land use patterns. Operation of the Brisbane LMF would not substantially change planned land use patterns due to light and glare because project light and glare impacts would be controlled by project lighting design features.	LU-MM#1: Implement Noise Mitigation in Conjunction with Land Use Development in Brisbane	Less than Significant

Impacts	Impact Description and CEQA Level of Significance before Mitigation	Mitigation Measure	CEQA Level of Significance after Mitigation
Conflicts with BCDC Bay Plan Shoreline Band Policies			
Impact LU#7: Conflict with BCDC Shoreline Band Policies	<p>Significant for both project alternatives: Construction of the East or West Brisbane LMF would include a partial realignment of Lagoon Road that would expand existing roadway within a BCDC priority use area designated for park uses, which would be considered inconsistent with the BCDC Bay Plan, which was adopted, in part, for the purpose of avoiding and mitigating environmental effects.</p> <p>Construction of the East or West Brisbane LMF would result in development within the shoreline bands (outside of a priority use area) of Brisbane Lagoon and Guadalupe Valley Creek. Construction of the East Brisbane LMF (Alternative A) would result in development within the shoreline bands (outside of a priority use area) of Visitacion Creek. Because both project alternatives do not provide maximum feasible public access, the project would be considered inconsistent with the BCDC Bay Plan, which was adopted, in part, for the purpose of avoiding and mitigating environmental effects.</p>	<p>LU-MM#2: Relocate Lagoon Road to Avoid Priority Use Areas within BCDC's Jurisdiction</p> <p>LU-MM#3: Shoreline Access Improvements in Brisbane</p>	Less than significant
Induced Population Growth			
Impact LU#8: Temporary Induced Population Growth	Less than significant for both alternatives: The anticipated population growth would not exceed planned levels during construction of the project.	No mitigation measures are required	N/A
Impact LU#9: Permanent Induced Population Growth	Less than significant for both alternatives: The anticipated population growth would not exceed planned levels as a result of operation of the project.	No mitigation measures are required	N/A

CEQA = California Environmental Quality Act
 HSR = high-speed rail
 LMF = light maintenance facility
 N/A = not applicable
 TOD = transit-oriented development

Impact LU#4: Permanent Alteration of Land Use Patterns from Land Use Conversion and Introduction of Incompatible Uses at Stations

The HSR modifications to Millbrae Station would require permanent conversion of 7.8 acres under both alternatives. Construction of the Millbrae Station modifications would result in a substantial, significant change in existing land uses due to the conversion of commercial buildings to transportation uses. Construction of the Millbrae Station modifications would also result in a substantial, significant change in planned land use patterns by conflicting with the planned

Millbrae Serra Station Development project. There is no available mitigation to minimize this impact; therefore, the permanent alteration of existing and land use patterns from the Millbrae Station would be significant and unavoidable.

Impact LU#5: Permanent Alteration of Land Use Patterns from Land Use Conversion at the Brisbane Light Maintenance Facility

The impact under CEQA would be significant for Alternatives A and B because construction of the East Brisbane LMF and West Brisbane LMF would require the permanent acquisition of lands designated as planned development (residential prohibited). In addition, Alternative B would result in an additional significant impact because the West Brisbane LMF would require the permanent acquisition of lands designated as planned development (residential permitted). The Authority would continue ongoing coordination with the City of Brisbane and the developers for the Brisbane Baylands in order to minimize potential incompatibilities between the Brisbane LMF and the planned development for the Brisbane Baylands. There is no available mitigation to minimize this impact; therefore, the permanent alteration of existing and land use patterns from the Brisbane LMF would be significant and unavoidable.

Furthermore, Alternative B would result in an additional significant impact because the West Brisbane LMF would require the grading of Icehouse Hill, which is a prominent area for habitat. This would be considered a permanent and significant alteration of an existing land use. There is no available mitigation to minimize this impact; therefore, the permanent alteration of this existing land use from the West Brisbane LMF would be significant and unavoidable.

Impact LU#6: Permanent Alteration of Land Use Patterns from Increased Noise, Light and Glare

Increased train service in the Brisbane area would result in noise levels that exceed the City of Brisbane's General Plan noise compatibility standards for planned land uses. The Authority has identified LU-MM#1, which includes several options to address noise impacts, including noise barriers, building insulation, and building location requirements that would reduce noise levels for future planned land use to meet the City of Brisbane's General Plan noise compatibility standards. Multistory residential uses in areas designated as planned development (residential permitted) that are greater than two stories may need to be placed behind commercial uses to buffer residential uses from train noise or be set back further from the train tracks to meet land use compatibility standards. While this could result in some minor redesign of certain areas designated as planned development (residential permitted), it would only affect the area immediately adjacent to the tracks and would not inhibit the ability to reach potential allowable residential buildout levels for the planned development (residential permitted) area west of the Caltrain tracks. Thus, noise impacts, as mitigated, would not result in a substantial change in land use patterns. As a result, operations of the East or West Brisbane LMF would not affect planned land uses such that a substantial change in land use patterns would occur.

Impact LU#7: Conflict with BCDC Shoreline Band Policies

The impact under CEQA would be significant for Alternatives A and B because construction of the East Brisbane LMF and West Brisbane LMF would include realignment of Lagoon Road, which would result in a permanent roadway in a priority use area designated by BCDC for a future park use, within BCDC's shoreline band. The Authority has identified LU-MM#2, which requires that the realignment of Lagoon Road be located in an area outside of the priority use area within BCDC's jurisdiction. With implementation of LU-MM#2, both project alternatives would not locate any project features within a priority use areas within the shoreline band. As a result, the realignment of Lagoon Road would not introduce a land use that would be inconsistent with the BCDC Bay Plan, which was adopted, in part, for the purpose of avoiding and mitigating environmental effects. Thus, with implementation of mitigation, the impact on a priority use area within BCDC's shoreline band would be less than significant under both project alternatives.

The impact under CEQA also would be significant for Alternatives A and B because project components do not include measures to maximize public access to the Bay or shoreline, which would be inconsistent with the Bay Plan's policy. Alternatives A and B would be located on the

shoreline bands of Brisbane Lagoon and Guadalupe Valley Creek. In addition, Alternative A would be located on the shoreline band of Visitacion Creek. The Authority has identified LU-MM#2, which would result in both project alternatives being located outside of the shoreline band of Brisbane Lagoon. The Authority has identified LU-MM#3, which would include construction of a new bicycle/pedestrian trail that would maximize public access to Brisbane Lagoon and San Francisco Bay, consistent with the proposed project. With implementation of LU-MM#3, the project would result in a net increase in public access, relative to existing conditions. The project would be consistent with the BCDC Bay Plan with implementation of LU-MM#3, and therefore the impact on BCDC's shoreline band would be less than significant.